Spur

ADDENDUM

PROJECT NUMBER	**621-24-701 (2409)**
PROJECT NAME	**EHRM Infrastructure Upgrades Tier 3 DC**
ADDENDUM NUMBER	**01**
DATE	**December 22, 2025**
SUBJECT	**Specification Modifications**

THE FOLLOWING MODIFICATIONS, ADDITIONS, AND DELETIONS ARE HEREBY MADE A PART OF THE CONTRACT DOCUMENTS.

SEAL:

GENERAL: This addendum modifies selected specifications.

PROJECT MANUAL:

ARCHITECTURE

A. 00 01 10 TABLE OF CONTENTS
   1. Identifies Specification Sections modified after Bid Issue.
   2. Identifies new sections added to project.
B. 00 10 11 MEDICAL CENTER REQUIREMENTS
   1. Paragraph B under 1. GENERAL INTENTION: COR and Alternate COR information revised.
   2. Paragraph B under 3. STATEMENT OF WORK: Period of Performance revised.
   3. Item G. CONTRACTOR WORK HOURS: Revised work hour information.
   4. Paragraph A under 14. SMOKING POLICY: Revised information.
   5. Paragraph F under 20. INTERIM LIFE SAFETY MEASURES (ISLM): Air intake information.
C. 01 00 00 GENERAL REQUIREMENTS
   1. Paragraph B under 1.2 GENERAL INTENTION: Bidder site visit information revised.
D. 01 32 16.15 PROJECT SCHEDULES
   1. New paragraph A under 1.4 COMPUTER PRODUCED SCHEDULES
E. 01 33 24 ELECTRONIC SUBMITTAL PROCEDURES (WEB-BASED SERVICE)
   1. Add this section in its entirety.
F. 01 45 29 TESTING LABORATORY SERVICES
   1. Add this section in its entirety.

G. 28 31 00 FIRE DETECTION AND ALARM

1. Under 1.5 WARRANTY, Item H. Emergency Service, paragraphs 3 & 4: revises service time.

TOTAL: 188 Pages 8 ½ x 11

END OF ADDENDUM NO. 01

DEPARTMENT OF VETERANS AFFAIRS
VHA MASTER SPECIFICATIONS

TABLE OF CONTENTS
Section 00 01 10

1 12/22/25

MEDICAL CENTER REQUIREMENTS

Section 00 10 11

1 12/22/25

INDEX

SECTION 00 10 11

JAMES H. QUILLEN VA MEDICAL CENTER REQUIREMENTS

GENERAL INFORMATION

SECURITY / SAFETY

RULES / REGULATIONS

POLICIES, PERMITS, & PROCEDURES

NOTE: IF INFORMATION WITHIN THIS SPECIFICATION IS IN CONFLICT WITH INFORMATION IN 01 00 00 GENERAL REQUIREMENTS OR 01 35 26 SAFETY REQUIREMENTS, THE INFORMATION IN THIS SPECIFICATION HAS PRIORITY

1. GENERAL INTENTION (CONTACT INFO).

A. This specification section pertains to station policy for construction projects performed at the James H. Quillen VA Medical Center at Mountain Home (Johnson City), Tennessee 37684. Safety and health concerns are taken seriously at this facility. Both our staff and yours are expected to strictly adhere to the regulations and requirements as specified herein. This is exceedingly important, since we must be primarily concerned for the safety of our patients. In this regard, OSHA Standards may protect worker safety and health, but they have minimal benefit for protecting the safety and health of our patients, due primarily to their differing medical conditions. Review this information as orientation with your personnel performing work on site. Where the requirements as outlined in this and section 01 00 00 are differing, the more stringent shall apply.

1 12/22/25

B. The Contracting Officer's Representative COR is responsible for the inspection of the work called for in the contract and specifications. The **Contracting Officer's Representative** will be **James Davis**. This COR can be reached at **423-926-1171, ext. 5129**. In the event the Contractor cannot reach the COR, he may contact the Alternate COR, **Billy McKinley**, at 423-926-1171, ext. 7728. Inspections made by the COR are for the sole benefit of the Government and do not relieve the Contractor of any quality control responsibility.

C. The Safety Manager is responsible for safety inspections of all contract operations. The Safety Manager will be **Shane Allen**. The Safety Manager can be reached at 423-926-1171, ext. 7334.

D. The Chief, Police Section is responsible for security at this facility. The Police Chief will be **Jeremy Paulins** and can be reached at 423-926-1171, ext. 7197.

2. MEDICAL CENTER ORIENTATION.

A. After contract award, a Pre-Construction Conference will be scheduled by the Contracting Officer. All issues of the contract and these requirements will be discussed (See Pre-Construction Conference Checklist, Attachment 00 10 11-A).

B. At the end of the conference the Contractor shall submit the following to the COR:

(1) A copy of the Contractor's Environmental Safety and Health Program Plan; a copy of the Contractor's AHA (Activity Hazard Analysis) plan, developed for detailing this project's site-specific ES&H Plan, including actual drawings depicting all required ES&H issues, etc.

(2) Request for Contractor Identification (I.D.) Badges, for all Contractor/Sub-contractor employees, Attachment 00 10 11-B.

(3) Initial 90 day schedule submitted in Microsoft Project and PDF format. The COR is responsible for accepting the schedule before commencing project. The 90 day schedule will identify the submission date of the full project schedule. The contractor is responsible for updating the schedule on a weekly basis. Projects with durations less than six months shall have a full project schedule submitted at the pre-construction conference unless otherwise approved by the COR.

(4) Identify the Contractor's Superintendent and Contractor's Competent Person(s).

(5) All contractor employees working on site shall attend the James H. Quillen site specific safety and infection control class prior to working on site. Coordinate with COR.

(6) OSHA Training Records for all such employees (30 hour for the Superintendent, 10 hour for all other) shall be provided 24hours in advance of the Site Specific training.

(7) VA Form 3 Records for all such employees shall be provided a minimum of 7 calendar days in advance of the site specific training

3. STATEMENT OF WORK.

A. SCOPE. For Reference Only. Refer to the project's full Scope of Work for details. This project consists of furnishing all supervision, labor, materials, equipment, and transportation. It also consists of performing all work in strict accordance with the applicable contract specifications and drawings that form the parts thereof.

B. PRINCIPAL FEATURES. The principal features of this project are listed in the applicable specifications and drawings and in no way limit the responsibilities of the Contractor in performing all the work that is required to provide a complete job.

Period of Performance -Contractor will have 365 days after NTP to complete

1 12/22/25

C. LOCATION. James H. Quillen VA Medical Center, Mountain Home (Johnson City), Tennessee 37684.

D. DRAWINGS - GENERAL. The contract drawings indicate the extent and location of construction work. If any departure from the contract drawings are deemed necessary by the Contractor, the details of such departure and the reasons therefore shall be submitted to the Contracting Officer for approval as soon as practical. No such departures shall be made without the proper written permission of the Contracting Officer. The Contractor is responsible for all information and requirements in drawings and specifications.

E. VERIFICATION OF DIMENSIONS. The Contractor shall visit the job site to thoroughly familiarize himself with all the details of the work and working conditions. The Contractor shall also verify all dimensions in the field and shall advise the Contracting Officer of any discrepancy before performing any work. The Contractor shall be specifically responsible for the coordination and proper relation of his work to the building, structure, phasing, and insure the safety of employees and workmen.

F. TERMINOLOGY.

(1) Work area - An area in which construction work is conducted to complete a contract.

(2) When "furnish", "provide", "install", or similar term is used in the contract, it shall mean a complete installation, ready for use.

(3) "Approved equal" or "equal" shall mean as approved by the Contracting Officer only. The Contracting Officer shall be the sole judge as to whether or not a substitute item is equal and any item that the Contractor wants to substitute for any item specified shall be submitted to the Contracting Officer for approval.

1 12/22/25

G. CONTRACTOR WORK HOURS.

1. Normal working hours for this contract will be from 7:00am to 4:40pm (local time) Monday through Friday except for weekends and established Federal Holidays.

2. The Contractor shall perform work during hours required by the phasing requirements of this contract. The Contractor may be required to schedule some aspects of the work, after hours, meaning from 5:00 pm until 1:00 am, whether indicated on the contract documents by specific phasing or not and at no additional cost to the Government. Some after hours work such as systems affecting Hospital operations cannot start until after 7:30 pm in the evening. This is required to assure un-interruption of Hospital operations, potential effect to patients, employees, and visitors. If Phasing requires after hours work, the Contractor shall submit an After Working Hours Activity Security Request, Attachment 00 10 11-C, at least 72 hours in advance, for approval by the COR. **The Contractor shall be required to verify this before bidding.**

4. CLEARANCES, BADGES, PARKING PERMITS, AND KEYS.

A. SECURITY CLEARANCE. This Medical Center reserves the right to initiate certain Homeland Security clearance requirements for Contractors, Subcontractors, and other outside vendors, as required. These requirements are subject to change without notice depending on the current threat level implemented by the Government. If security clearances are known to be required, the COR will advise the Contractor at the pre-construction conference. The procedure to obtain security clearance may be dependent on the threat level and will be communicated to the Contractor by the Contracting Officer and/or COR as necessary.

B. I.D. BADGES. All Contractor personnel who enter Medical Center property for this project shall obtain I.D. badges. Contractor personnel shall include employees, Subcontractors, Subcontractor employees, suppliers, and delivery personnel entering the Medical Center. This does not apply to suppliers and delivery personnel making deliveries to the VA warehouse loading dock only. Contractor personnel who enter the Medical Center on an intermittent, one day at a time basis shall obtain a Temporary Contractor badge. All others shall obtain a photo I.D. badge. Badges shall be worn above the belt at all times while on Medical Center property.

(1) *Photo I.D. Badge*. The Contractor shall provide to the Contracting Officer, or COR, a completed Contractor I.D. Badge and Parking Permit Request, Attachment 00 10 11-B, for each photo I.D. badge required. The parking section of this form does not have to be completed if a parking permit is not required. The Contracting Officer, or COR, will provide the completed form to the VA Police Service, and will advise the Contractor of procedures for obtaining the Photo I.D. badge. Photo I.D. badges will have expiration dates assigned by the Contracting Officer and shall be returned to the VA Police Service upon expiration, or when Contractor personnel have completed work under this project prior to their expiration, whichever is sooner.

(2) *Temporary Contractor Badge*. Temporary Contractor badges will be available at location as directed by the COR. Contractors shall sign for Temporary Contractor badges. Temporary Contractor badges shall be returned each day upon signing out. Temporary Contractor badges will not be issued to Contractors who have been issued a picture ID badge.

(3) The Contractor shall return all I.D. badges to the VA Police Service or final payment will be delayed.

(4) Failure to comply with these requirements shall result in the immediate removal of Contractor personnel from this Medical Center. Any such Contractor personnel removed for failure to comply will not be permitted re-entry to work on this project until approved by the Contracting Officer.

C. PARKING PERMITS / TRAFFIC REGULATIONS.

(1) The Contractor will be assigned a parking area during the pre-construction conference. All Contractor personnel shall use only this area for parking while on Medical Center property. The Contractor shall not park on grassy areas, unless approved by the COR, and the Contractor agrees to restore areas back to VA standards.

(2) All Contractor personnel who park vehicles on Medical Center property for this project shall obtain VA issued parking permits from the VA Police Service. This does not apply to suppliers and delivery personnel making deliveries to the VA warehouse loading dock only. At any time parking permits are required, the following procedure shall be followed:

(a) The Contractor shall provide to the Contracting Officer, or COR, a completed Contractor I.D. Badge and Parking Permit Request, Attachment 00 10 11-B, for each parking permit required. The photo I.D. section of this form does not have to be completed if a photo I.D. is not required.

(b) The Contracting Officer, or COR, will provide the completed form to the VA Police Service, and will advise the Contractor of procedures for obtaining the Parking Permit.

(3) The Contractor shall return all parking permits to the VA Police Service or final payment will be delayed.

(4) Drivers should be particularly concerned with pedestrian traffic. Yield to pedestrians in crosswalks.

(5) Posted speed limits and all other traffic controls are to be observed by operators at all times.

(6) Seat belt use is mandatory on the station.

(7) Federal police officers maintain a 24-hour patrol.

(8) Failure to comply with these requirements will result in the immediate removal of Contractor personnel from this Medical Center. Any such Contractor personnel removed for failure to comply will not be permitted re-entry to work on this project until approved by the Contracting Officer.

D. KEYS.

(1) Only a limited number of keys will be issued to the Contractor. Contractor shall request and submit a "Contractor Key Request", Attachment 00 10 11-D, for any required keys for any Engineering Service areas from the COR. The COR will advise the Contractor of the procedure to obtain the keys.

(2) The keys shall be returned at the end of final inspection and/or punch list completion, or final payment will be delayed. If the Contractor loses a key, all areas that are keyed to that key will be re-keyed by the VA at the Contractor's expense.

(3) The Contractor shall ensure all doors leading to and from construction areas are either monitored or locked to prevent access to the areas from unauthorized persons.

5. SUPERVISION / SUPERINTENDENT / COMMUNICATIONS.

A. At all times during the performance of this contract, the Contractor's Superintendent shall be available by cellular phone. At the beginning of the contract, and prior to beginning any construction, the Contractor shall supply the COR with the telephone number for the Superintendent.

B. The superintendent shall be English speaking, and an English-speaking foreman shall be physically located on the construction site at all times work is being performed on site.

C. The foreman, superintendent and/or other Contractor designee will be the Contractor's Competent Person(s) as identified by OSHA. The Contractor's Competent Person(s) shall meet OSHA training guidelines and shall be capable of making decisions and acting on behalf of the Contractor. A Contractor Competent Person shall be on the job site at all times work is being performed. If the Contractor Competent Person is absent from the job site for an extended period of time, the VA Contracting Officer may send all Contractor/Subcontractor employees off the job.

6. USE OF GOVERNMENT-OWNED MATERIAL AND EQUIPMENT.

Use of Government-owned material and equipment is **prohibited.**

7. GOVERNMENT FURNISHED PROPERTY.

A. The Government-furnished property, if any, listed in the contract will be used only for the performance of this contract unless otherwise authorized by the Contracting Officer.

B. The Contractor shall, at all times, take any and all steps necessary for maintenance and preservation of all Government-furnished property.

C. The Contractor shall comply with all reasonable requests of the Contracting Officer to enclose, or specially protect, Government-furnished property.

8. CONTRACTOR'S TRAILERS.

Contractor's trailers shall be located at the area assigned. All utility connections to the trailer shall be installed at the Contractor's expense. The Contractor shall remove any trailers upon completion of the contract, unless approved by the COR to leave in place.

9. ROAD CLOSURES.

A. For any work requiring closure of a road or parking lot, the Contractor shall complete the Permit for Road Closure, Attachment 00 10 11-E, at least fourteen (14) days in advance, for approval by the COR and the Safety Unit.

B. Permits will be issued for no longer than one (1) week. Work lasting longer than one (1) week will be authorized by multiple permits.

C. The Contractor shall supply and install any required road barricades and signage. The Contractor shall completely remove any road barricades and signage at the end of the permit.

10. DELIVERY OF MATERIALS.

Deliveries of materials and equipment shall be made at times when the Contractor and/or the Subcontractor are available to accept. **The VA will not be responsible for accepting, receiving or storing** Contractor's and/or Subcontractor's delivered materials.

11. STORAGE AREA / ACCESS ROADS / & DOCKS.

A. All storage shall be confined to those areas designated by the COR.

B. Only established roadways or those authorized by the COR for construction, and only loading and unloading docks authorized by the COR, shall be utilized. No restricted roadway or dock shall be utilized except by special permission of the COR (See item 9). Weight limits recommended by the vehicle manufacturers or prescribed by the COR shall be adhered to.

12. UTILITIES / OUTAGES.

A. The Contractor shall verify that all utilities outside of the construction area are not affected prior to disconnecting or shutting off any utilities. All shutdowns shall be requested, in writing, to the COR at least seven (7) days prior to shut down.

B. You shall notify the COR:

(1) Prior to lock out / tag out of any utility system.

(2) If a utility failure occurs.

(3) Prior to restoring a system.

13. ENVIRONMENTAL PROTECTION.

A. The VA regards environmental protection requirements very seriously. Adherence to these requirements is subject to continuing scrutiny from the community, and backed by severe penalties, such as fines and incarceration. The Contractor shall fully comply with all federal, state and local environmental regulations. These environmental requirements will be strictly enforced.

B. No hazardous materials shall be disposed of on Government property. The Contractor shall ensure all waste is hauled off-site or disposed in Contractor owned and operated waste removal containers. The Contractor shall transport and dispose of hazardous wastes or materials in accordance with all related federal, state, and local regulations.

C. The Contractor shall forward a copy of all waste manifests for special or hazardous wastes to the COR. Environmental requirements will be strictly enforced.

1 12/22/25

14. SMOKING POLICY.

A. No Smoking Indoors or Outdoors: Smoking cigarettes, cigars, pipes, or using any other tobacco products (including e-cigarettes and vaping devices) is prohibited inside VA facilities and on VA premises, including parking lots, walkways, and other outdoor areas.

15. CONTRACT WORKER'S SAFETY INFORMATION.

A. The fire alarm system connects all buildings at this facility, and is activated by various heat, duct, smoke sensors, pull stations, and sprinkler systems. Manual pull stations are provided at each entrance. Please survey the area in which you are working to locate the manual pull stations.

B. IN THE EVENT OF A FIRE ALARM SOUNDING, you are to remain in your area, unless medical center personnel (Safety, Nursing, or Engineering) instruct otherwise, or unless a fire situation is in your area, in which case you should immediately evacuate.

C. **IN THE EVENT OF A FIRE, REMEMBER RACE**: **R**escue persons in immediate danger, pull the fire **A**larm and **C**ontain the fire by closing any doors. If it is safe to do so, and you have been trained, try to **E**xtinguish the fire with a portable fire extinguisher. If you do not hear the alarm sound, call extension 2911 to report the location. Know the location of the fire alarm and extinguisher in your work area.

D. INJURIES AND EMERGENCY MEDICAL SERVICES. Emergency medical services for stabilization purposes are available for Contractors at this facility. For medical emergencies, dial 2-911 when inside any building. Report the nature of the emergency and location. The operator will dispatch in-house personnel or coordinate an outside emergency assistance based on the nature of the emergency.

E. HAZARDOUS WASTE. The VA Medical Center at Mountain Home indicates waste that is hazardous with different colored containers:

- RED for infectious or biohazardous waste.
- YELLOW for chemotherapy waste.
- CLEAR for general waste.

Signs on containers also indicate whether the contents are biohazardous, radioactive, or cytotoxic.

The Contractor Shall Not Touch the Contents of Any of These Containers

16. PATIENT CARE AREAS.

A. The VA Medical Center at Mountain Home is a full service medical center with inpatients, outpatients, and staff who can be affected by what you do while working here. Many of these patients may have health problems that make them more susceptible to materials used or generated in your work.

B. Before entering a patient care room, the Contractor shall receive permission and instructions from the nurse in charge. The Contractor shall respect the privacy of all patients. Remember, the patients at the Medical Center at Mountain Home are veterans who have served to protect our country.

C. In order to comprehensively track potential infection control risks during construction, a "Ceiling Opening Permit" Attachment L will be issued by the medical center Infection Control Section only after construction workers have received the required infection control training. In addition, for medical center services that require frequent access to areas above ceilings, a "Ceiling Opening Permit" can be obtained on a long-term basis from the Infection Control Section once their employees have received the required infection control training.

D. The Contractor shall keep tools, ladders, etc. away from patients to prevent injuries.

E. Before departing the construction site, the Contractor shall secure incomplete work (i.e., cover exposed wiring in electrical outlets) in any area to which patients visitors, and/or non-construction-related employees are not prohibited access.

17. GENERAL CONSTRUCTION SITE SAFETY.

A. The Contractor shall maintain safety in the construction site / area in accordance with the provisions of the contract, to include, but not be limited to:

- Environmental Protection Agency (EPA);
- Occupational Safety and Health Administration (OSHA) Regulations;
- National Electric Codes;
- National Fire Protection Association (NFPA) 70; and,
- NFPA 101, Life Safety Code.

B. The Contractor shall work in a safe manner and shall take all proper precautions while performing work. Extra precautions shall be taken by the Contractor when working around persons occupying the building during construction.

C. The Contractor shall follow all federal, state, and local safety and health regulations.

D. The Contractor shall provide appropriate personal protective equipment (PPE) for their employees. Contractor employees shall wear the provided PPE, as appropriate.

E. The Contractor shall post appropriate signs in specific hazardous areas.

F. The Contractor shall keep all construction areas secure, especially mechanical and electrical rooms, against entry of unauthorized individuals including patients.

G. The Contractor shall not put trash or other building materials to be discarded in VA dumpsters. The Contractor shall furnish their own waste receptacle or dumpster and remove trash daily from the Medical Center grounds.

H. The Contractor shall not ask to borrow or use any Government-owned tools, machines, or equipment.

18. ACCIDENT PREVENTION.

A. The Contractor shall comply with the safety requirements described in specification section 01 00 00, item 1.5.

B. The Contractor shall increase hazard surveillance of buildings, grounds, and equipment affected by construction, with special attention to excavations, construction areas, construction storage, and field offices.

C. The Contractor shall limit access to construction sites by personnel, patients and visitors not involved with construction activities. Where total isolation of construction activities is not feasible, The Contractor shall limit access by supplying and using freestanding barricades or other appropriate means. The Contractor shall also supply and use appropriate signage to warn and redirect people away from the construction area and associated hazards.

19. ACCESS TO CONSTRUCTION AREAS.

A. The Contractor shall ensure the construction site has free and unobstructed exits. The Contractor shall maintain escape routes for construction workers at all times.

B. The Contractor shall ensure free and unobstructed access is available to emergency services and for fire, police and other emergency forces. The Contractor shall not obstruct any doorway, hallway, or exit without notifying the COR and/or the Safety Unit, to determine if ILSM modifications are required.

C. Means of exiting construction areas shall be inspected by the Contractor daily and documented by the Contractor on both the Daily Log, Attachment 00 10 11-F, and on the Fire Safety Log, Attachment 00 10 11-G. The Contractor shall provide the completed Daily Log to the COR before the close of the next working day. The Contractor shall provide the completed Fire Safety Log to the COR upon request but no later than the first working day of each month. In addition, the construction site may be inspected by the Government at any time.

20. INTERIM LIFE SAFETY MEASURES (ILSM). ILSMs are a series of operational actions taken to temporarily reduce the hazards posed by existing life safety deficiencies or construction. ILSMs consist of the following actions:

A. The Contractor shall coordinate with the COR and/or the Safety Technician (Fire Inspector, extension 7734); to ensure fire protection systems are in good working order in the construction area.

B. Any work involving the fire protection systems including fire alarm and sprinkler systems shall require written permission to proceed from the COR. **Do not tamper with or otherwise disturb any fire alarm and sprinkler system components without prior written permission. To do so without written permission will result in an adverse action by the VA.** The Contractor shall obtain written permission by submitting a Request to Disarm Fire Alarm / Sprinkler System, Attachment 00 10 11-H, to the COR, 24 hours prior to commencing work on any fire protection system.

C. A temporary, but equivalent, system shall be provided by the Contractor when any fire protection system is impaired due to construction.

D. The Contractor shall inspect and test temporary systems monthly.

E. The Contractor shall train personnel when structural or compartment features of fire safety are compromised.

1 12/22/25

F. Outside air intakes for air handling equipment serving patient areas are to be located 25 feet away, in any direction, from sources of refrigerants. This includes but is not limited to heat pumps, air conditioners, dehumidifiers, chillers, coolers, freezers, etc.

21. FIRE PREVENTION.

A. The Contractor shall ensure that temporary construction partitions are smoke tight and are of non-combustible material so they will not contribute to the development or spread of fire.

B. The Contractor shall ensure all Contractor construction personnel are trained in fire protection.

C. The Contractor shall develop and enforce storage, housekeeping, and debris removal policies and procedures that reduce the flammable and combustible fire load to the lowest level necessary for daily operations.

D. The Contractor shall provide fire stopping for all penetrations in any wall, especially in vertical and horizontal fire/smoke partitions. If penetrations of smoke and fire barriers are to be made as part of this project, a "Penetration Permit" Attachment M must be requested and obtained from the COR responsible for the work. Once the penetration of the smoke or fire barrier has been made and properly sealed with fire stopping material, and the COR has verified same, the completed permit must be returned to the issuing party and the completed permit forwarded to the Safety Unit for verification. Copies of completed "Penetration Permits" will be maintained by the Safety Unit.

22. FIRE WATCH.

A. The Contractor shall be responsible for providing any required fire watches when the construction impairs an existing fire protection system for more than 4 hours in a 24-hour period. A fire watch shall at least involve some special action beyond normal staffing, such as assigning additional personnel to walk the affected areas.

B. The Contractor shall coordinate with the COR to obtain a radio with direct contact to VA Police for use during a fire watch. The Contractor shall also provide a telephone for the fire watch. The COR will provide the Contractor with emergency numbers to be used.

C. The Contractor shall provide adequate portable fire extinguishers and the necessary training for individuals assigned to fire watch duties.

D. Fire watch surveillance conducted by the Contractor shall be documented on the Fire Safety Log, Attachment 00 10 11-G.

23. INFECTION CONTROL ORIENTATION FOR CONSTRUCTION WORKERS.

A. The goal of the Infection Control Program is to identify and reduce the risks of acquiring and transmitting infections among patients, employees, physicians and other licensed independent practitioners, contract service workers, volunteers, students and visitors.

B. During construction, renovation and minor improvement projects, hidden infectious disease hazards may be released into the air, carried on dust particles or on clothing. One such hazard is fungal organisms such as Aspergillus. Aspergillus species may be found in decaying leaves and compost, plaster and drywall, and settled dust. These organisms usually do not cause problems in healthy people but can cause problems in a hospital that is full of sick patients! Aspergillus and other fungal organisms can cause illness and even death in people with certain medical conditions such as transplant patients, cancer treatment patients and patients with lung problems or poor immunity. Therefore, it is critical that you do your part to keep our patients, employees and visitors as safe and healthy as possible. We, in turn, will make conditions as safe as possible for you.

C. MEDICAL WASTE.

(1) We will remove any medical waste, including sharps containers (for used needles and syringes), from construction areas prior to the start of projects.

(2) If the Contractor finds any needles, syringes or sharp medical objects, the Contractor shall notify the COR and Infection Control staff at 423-926-1171 x7542 or 7530, or hospital pager *4-218 or *4-785 *immediately.*

D. BARRIER WALLS:

The Contractor shall ensure construction areas are kept separate from patient care areas by barriers that keep the dust and dirt inside the worksite. The barrier walls shall provide a complete seal of the construction area from adjacent areas (walls may be rigid 6 mil thickness plastic). Rigid barriers shall be used for periods longer than 24 hours.

E. ENVIRONMENTAL CONTROL:

(1) The Contractor shall maintain negative air pressure within the construction area, such that air shall be drawn into the construction area, and dust and fungal spores shall not be disseminated toward patient care areas. This may require fans or other negative pressure producing equipment.

(2) The Contractor shall remove demolition debris in tightly fitted covered carts. The Contractor shall use specified traffic patterns, approved by the COR, for debris removal.

(3) The Contractor shall place sticky or walk-off mats immediately outside the construction zone. The Contractor shall change the mats whenever necessary to control the spread of dust and dirt.

(4) The Contractor shall use exterior window seals to reduce the amount of outside excavation debris coming into the building.

(5) If demolition chutes are used, the Contractor shall seal them when not in use. The Contractor shall spray the chute and damper with water, as necessary, to maintain dust control.

(6) The Contractor shall provide for control, collection and disposal of any drain liquid or sludge found when demolishing plumbing.

F. TRAFFIC CONTROL:

(1) The Contractor shall use only entry and exit procedures designated by the COR.

(2) The Contractor shall keep all egress pathways free of debris.

(3) The Contractor shall not allow unauthorized personnel to enter construction areas.

(4) The Contractor shall use only elevators designated by the COR.

G. CLEANING:

(1) The Contractor shall keep the construction area clean on a *daily* basis.

(2) The Contractor shall keep dust and dirt to a minimum.

H. WORKERS:

(1) Contractor clothing shall be free of loose soil and debris when exiting the construction area.

(2) The Contractor shall use Contractor-provided personal protective equipment (masks, face shields, etc.) as indicated for the task at hand.

(3) Handwashing is the best method of reducing the transmission of infection. The Contractor should always wash hands with soap and water after visiting the restroom, before eating or smoking, and when leaving the construction site.

Questions? Please feel free to call the Infection Control, 423-926-1171 x 7542.

24. AIRBORNE DUST CONTROL DURING CONSTRUCTION.

A. Generation of dust is a major concern within staff, and especially patient, occupied buildings. Where operations involve the generation of dust; the Contractor shall direct all efforts at reducing airborne generated dust to the lowest level feasible. This may be accomplished by a number of methods. These include misting the area with water or use of tools attached to high efficiency particulate air (HEPA) filtering vacuums. Where large amounts of materials may be disturbed, resulting in airborne dust, The Contractor shall establish full ceiling-to-floor plastic barriers as required.

B. CLASSIFICATION OF JOBS:

(1) *CLASS I*- Includes, but is not limited to, minor disturbances involving plumbing, electrical, carpentry, ductwork, and minor aesthetic improvements.

(2) *CLASS II*- (projects require barrier precautions) - Includes, but is not limited to, construction of new walls, construction of new rooms, major utility changes, major equipment installation, demolition of wallboards, plaster, ceramic tiles, or ceiling and floor tiles, removal of windows, removal of casework, etc.

C. CLASS I PROCEDURES. The Contractor shall:

(1) Mist (with water) work surfaces to control dust while cutting. Alternatively, a high efficiency particulate air vacuum (HEPA) can be used by positioning the vacuum next to the equipment at the site.

(2) Tape doors for activities that produce large amounts of dust and block off and seal air vents.

(3) Cover holes/openings (penetrations), in walls, ceilings, floors, or doors that cannot be patched or fixed within 4 hours. Only approved fire-rated materials shall be used to fill holes in fire/smoke walls.

(4) Comply with OSHA regulations regarding noise and vapor containment.

(5) Cleanup and disposal: Construction waste shall be contained before transport using plastic bags and/or covered transport receptacle and/or cart and taped covering.

(6) Wet mop and/or HEPA vacuum before leaving work area.

(7) Place dust mats at entrance and exit of work areas, and clean or change daily to prevent tracking of dust into occupied areas.

(8) After work completion, remove covering from air vents.

D. CLASS II PROCEDURES. The Contractor shall:

(1) Post construction warning signs

(2) Use the same procedures as Class I - However, use of a HEPA vacuum is mandatory.

(3) Construct all dust barriers before construction begins per the following instructions: For single rooms, seal door/frame with tape and plastic. The sheet should be divided vertically with a knife. Flaps should be taped on either side of the single sheet to create a flapped entrance.

(4) For larger areas, install an airtight (fire retardant) plastic barrier that extends from floor to ceiling, or seal to prevent dust and debris from escaping. Seal all seams with duct tape. Install barrier partitions to stop movement of air and debris penetrating ceiling envelopes, chases and/or ceiling spaces. Construct entrance with a double flap of plastic to prevent escape of elevator shafts or stairways are within the field of construction, install solid barriers.

25. INTERSTITIAL WORK PROTOCOL.

A. When working through ceiling, the Contractor shall:

(1) Ensure that all employees and Contractors have been trained in the recognition of asbestos hazards, proper work practices, exposure assessment protocol, personal protective equipment and emergency response actions. All employees shall have the proper level of training.

(2) Regulate access to the work area by putting up barrier tape and/or warning signs as necessary.

(3) Vacate the area where the work activity will be performed. If area cannot be evacuated, erect a mini-enclosure or "Kontrol Kube" from the floor to the suspended ceiling.

(4) Prepare area with polyethylene drop cloth.

(5) Place tools, equipment and materials onto the drop cloth or inside the containment barrier.

(6) Don personal protective equipment.

(7) Carefully lift up ceiling tile. Keep the ceiling tile as flat as possible while lifting. Lift tile slightly above grid system and slowly slide tile to one side, leaving tile on top of an adjacent tile.

(8) Wet wipe or HEPA vacuum the t-bars holding the tile.

(9) Wet wipe or HEPA vacuum the topside of the tile.

(10) Wet wipe or HEPA vacuum the underside of the tile that will be moved.

(11) Carefully replace ceiling tile if necessary.

(12) Perform clean up below ceiling, take down barrier tape, warning signs and unseal HVAC systems.

(13) Dispose of polyethylene sheeting, cleaning rags and any PPE clothing as asbestos-containing waste

(14) Inspect area and when decontamination appears to be complete, request clearance from safety office or independent certified industrial hygienist or asbestos consultant.

(15) Reoccupy room after clearance has been obtained.

B. When working above ceiling off any catwalk, the Contractor shall:

(1) Ensure that all employees and Contractors have been trained in the recognition of asbestos hazards, proper work practices, exposure assessment protocol, personal protective equipment and emergency response actions. All employees shall have the proper level of training.

(2) Determine the exact location of work and path of access required. Conduct an assessment of integrity of ceiling tile.

(3) If ceiling tile appears to have gaps to the interstitial, replace the tile per the protocol above.

(4) Vacate the area where the work activity will be performed.

(5) Regulate access to the work area by putting up barrier tape and/or warning signs as necessary.

(6) Install a visqueen barrier on the underside of the ceiling.

(7) Complete the work.

(8) An asbestos abatement company shall be used to HEPA-vacuum the tops of tiles after completion of the work, and to remove the visqueen barrier.

(9) Perform clean-up below ceiling, take down barrier tape, warning signs and unseal HVAC systems.

(10) Dispose of polyethylene sheeting, cleaning rags and any PPE clothing as asbestos-containing waste.

(11) Inspect area and when decontamination appears to be complete, request clearance from safety office or independent certified industrial hygienist or asbestos consultant.

(12) Reoccupy room after clearance has been obtained.

26. HOUSEKEEPING. The Contractor shall:

A. Protect patients and VA personnel in occupied areas from the hazards of dust, noise, construction debris and material associated with a construction environment.

B. Keep work area clear, clean and free of loose debris

C. Secure construction materials and partially installed work that would create a safety hazard or interfere with VA personnel duties and traffic.

D. Wet mop occupied areas clean and remove any accumulation of dust/debris from cutting or drilling from any surface at the end of each workday.

E. Make every effort to keep dust and noise to a minimum at all times. Take special precautions to protect VA equipment from damage including excessive dust.

F. Maintain clear access to mechanical, electrical devices, equipment and main corridors. This will ensure access to existing systems in the event of an emergency.

G. Clean area of all construction debris and dust upon completion of demolition and/or renovation.

H. During construction operations, keep existing finishes protected from damage. Cover and protect all carpets during construction. Any carpets or surfaces damaged as a result of construction activities shall be replaced at the Contractor's expense.

27. TRENCHING/EXCAVATIONS.

All Trenching and Excavation operations shall comply with all applicable requirements of OSHA, 29 CFR 1926, Subpart P, for Excavating and Trenching, (including related appendices), 1926.800 Underground Construction, and 1926.956, Underground Lines.

28. HAZARDOUS MATERIALS

A. Your operations may involve the use of hazardous materials. Prior to locating hazardous materials on site, the Contractor shall submit all Material Data Safety Sheets (MSDS) through the COR for evaluation by the facility Safety Unit.

B. The Contractor shall store a minimal amount of hazardous materials within buildings with only enough on hand to perform daily tasks. The Contractor shall either remove flammable materials from buildings at the end of the work shift or store them in approved flammable storage

containers. The Contractor shall ensure hazardous materials are maintained in appropriate labeled containers at all times.

C. The Contractor shall ensure there is adequate ventilation to remove vapors of hazardous materials in use. Many of the patients being cared for in the facility are susceptible to environmental contaminants, even when odors seem minimal. The Contractor shall isolate those areas where vapors are produced and shall ventilate to the most extent possible to reduce the number of complaints. The Contractor shall ensure that HVAC fresh air intakes will not draw in ventilated vapors. The Contractor shall also ensure the area to which vapors are ventilated is not in an area that patient, employees, and visitors must use to enter or exit a building.

29. HAZARDOUS SPILLS.

- Contain spill if possible.
- Secure area.
- Locate MSDS.
- Notify the COR and/or the Safety Unit at extension 7727.

30. LEAD BASED PAINT (LBP).

The Contractor shall notify the Contracting Officer promptly, and before such conditions are disturbed, when Lead Based Paint (LBP) is suspected. A laboratory analysis of suspected material will be completed at the direction of the Contracting Officer at Government expense. If the test proves to be positive, the VA may issue a separate contract to remove, abate, or otherwise render the hazard safe or the Contractor may be required to remove, abate or otherwise render the hazard safe. The Contractor will then submit a cost proposal to the Contracting Officer based on the findings.

31. CONTACT WITH ASBESTOS CONTAINING MATERIALS (ACM).

A. To protect and ensure all your employees are aware that asbestos containing materials have been used in the construction of this facility, The Contractor shall have them review this section of the specification and complete the Contractor/Subcontractor/Employee Notification of Asbestos awareness statement, Attachment 00 10 11-I.

Prior to commencing work, the Contractor shall ensure this statement has been signed by all employees, and shall forward the completed statement to the COR.

B. Due to the age of buildings, many contain asbestos containing materials (ACM). Primary ACM uses in the medical center include floor tile, mastic, piping, and HVAC insulation. Some areas may contain damaged asbestos and should not be accessed without prior abatement. The Contractor shall consult with the COR to determine the potential for contact with ACM during this contract. In certain buildings, the Contractor shall assume that any sprayed-on fireproofing and thermal insulation contains asbestos. In certain buildings, all interstitial spaces are considered asbestos hazard areas. If there is potential for ACM contact, the Contractor shall have the required specific certification, training and personal protective equipment outlined in the Occupational Safety and Health Administration (OSHA) regulations.

C. Where disturbance of asbestos is likely, it has been addressed in the contract for removal. If unexpected contact with the presence of asbestos is possible, stop all work in the immediate area and immediately contact the COR and/or the Safety Unit at extension 7727 to make necessary arrangements for removal.

D. Prior to performing work above any ceiling or starting in a new area, the Contractor shall consult with the COR concerning existing conditions of ACM.

E. ACM may be identified and labeled. If an area labeled as to contain ACM material, or suspected to contain ACM, is encountered, all work shall cease immediately, and the Contractor shall notify the COR immediately.

F. Ceiling tiles provide the barrier between the asbestos in the interstitial and the occupied areas below. Interior walls provide a similar barrier to asbestos fireproofing on vertical columns. If there is potential for ACM contact, the Contractor shall:

(1) **Not** move or displaced ceiling tiles without proper containment and personal protective equipment.

(2) **Not** make wall penetrations without proper containment and personal protective equipment.

(3) Immediately report all disturbances of asbestos-containing materials to your supervisor and the COR.

G. The most common type of ACM insulation the Contractor may encounter includes thermal system insulation (TSI) and floor tile.

(1) ACM TSI is generally covered with cloth wrap or lagging, and the asbestos substrate generally appears white in color. The Contractor shall **not sand, drill, gouge, or otherwise disturb this type of insulation**. Contractors disturbing or releasing asbestos containing materials shall be liable for all damages and cleanup costs.

(2) In some areas, asbestos insulation has been identified on elbows, between fiberglass insulation, as patching materials among the fiberglass insulation. Fiberglass insulation used in this facility is usually yellow or pink in color, wrapped either by cloth or paper lagging.

32. LOCK-OUT / TAG-OUT ENERGY CONTROL PROCEDURES

A. The Contractor shall request a copy of the latest procedures pertaining to this Medical Center on Control of Hazardous Energy (Lock-Out / Tag-Out) from the COR if work on energized circuits is required by this contract. The Contractor shall follow the procedures provided by the COR.

B. The Contractor shall also comply with OSHA 1910.147, Lock-out / Tag-out standard.

33. HOT WORK PERMITS

A. Hot work operations include, cutting, welding, thermal welding, brazing, soldering, grinding, thermal spraying, thawing pipes, or any similar activity.

B. For hot work operations, the Contractor shall be responsible for conforming to all Medical Center regulations, policies and procedures concerning Hot Work Permits, as outlined below:

(1) Prior to the performance of hot work, the Contractor shall complete and submit a request for a Hot Work Permit to the COR, Attachment 00 10 11-J.

(2) The COR will have the area inspected to ensure that the requirements of NFPA 241 and OSHA standards have been satisfied. If standards are met, the Hot Work Permit will be approved by the Safety Technician and the completed permit will be provided to the Contractor by the COR. The Contractor shall post it in the immediate area of the work to be performed.

(3) The Hot Work Permit shall apply only to the location identified on the permit. If additional areas involve hot work, additional permits shall be requested by the Contractor.

(4) Upon completion of all hot work, the Contractor shall notify the COR for a re-inspection of the area.

C. The Contractor shall not use any of the extinguishers in the medical center for standby purpose while conducting hot work. The Contractor shall supply Class ABC extinguishers for hot work operations. Medical Center extinguishers are only to be used by the Contractor in the event of a fire and shall not be used for hot work operations.

34. PERMIT REQUIRED CONFINED SPACES

A. There are numerous permits required confined spaces on this facility. These include:

- Any above or underground fuel storage tank
- Manholes (All 5 feet or deeper)
- Sewage lift stations
- Air ducts/Air handling units
- Water storage tanks
- Crawl spaces
- Any space on this facility meeting the definition of a permit-required confined space as

  outlined in OSHA Standard 29 CFR 1910.146

B. Contractors performing work on this facility shall follow all requirements outlined in OSHA Standard 29 CFR 1910.146, Permit-Required Confined Spaces

C. Prior to entering a permit-required confined space the Contractor shall:

(1) Submit a written Confined Space Policy, fully compliant with OSHA Standard 29 CFR 1910.146, Permit-Required Confined Spaces to the COR. This policy shall include, but not limited to:

- Permitting
- Air Monitoring
- Entrant, Entry Supervisor, & Attendant training
- Ventilation
- Entrant retrieval and rescue capabilities

(2) Complete, and submit to the COR, a Confined Space Entry Permit, Attachment 00 10 11-K.

(3) Await permit approval before commencing confined space operations.

35. FLUORESCENT (PCB AND/OR MERCURY CONTAINING) FIXTURES

The Contractor shall dispose of all fluorescent lighting fixtures removed as part of this project in accordance with Environmental Protection Agency (EPA) and Tennessee Department of Environment and Conservation (TDEC) regulations.

36. SAFETY / INTERMEDIATE INSPECTIONS

A. The professional Occupational Safety and Health staff (i.e., members of the Construction Safety Committee) at this facility will perform safety inspections of all contract operations. Written reports of unsafe practice conditions will be reported to the COR, and Contracting Officer, for immediate attention and resolution.

B. The COR will perform other intermediate inspections, as needed by the project scope, or as requested by the Contractor.

C. The COR may require additional safety procedures from the Contractor in the following areas, as applicable to the contract:

- PPE / Respiratory Protection
- Fall Protection
- Lead/Silica
- Confined Space Entry
- Excavation and Trenching

- Scaffolds and Aerial Lifts
- Stairways and Ladders
- Cranes / Heavy Equipment
- Electrical
- Energy Isolation (Lock Out / Tag Out)
- Hand and Power Tools
- Steel Erection
- Material Handling and Rigging
- Welding and Cutting

REQUIREMENTS FOR INSTALLATION OF TELECOM/DATA DROPS FOR MEDICAL CENTER

All new telecom/data drops for the James H. Quillen VA Medical Center shall be CAT6-E drops provided and installed by a certified communications contractor.

In cases where existing CAT5-E/CAT6-E drops may require moving due to reconfiguration of spaces (or rooms) demolition requirements as follow are in effect:

Existing drops must be removed from existing face plates, pulled up above ceiling, put back into the same face plate, then bagged (sandwich bags) and rolled up onto the nearest J-hook.

2. If any existing drop can be re-used because it is long enough to be pulled and properly secured in a new wall location, then the clean, un-bagged drop will not require re-testing and re-certification. Original jack label must be intact or replaced with machine generated label.

3. If any existing drop cannot be re-used because it was damaged, cut, not bagged, etc., then it shall be replaced in its entirety, tested, marked, and documented according to TIA/EIA607A standards.

TELECOM/DATA OUTLETS:

1. Combined telecom/data (floor or wall) outlets (also called drops) shall be provided as required, within 36" of an existing electrical power outlet. All telecom/data drops will be machine labeled (format = telecom room number-three digit jack number [L121-042]. Workstation outlets, cables, etc., should be installed by certified communications contractors. All CAT6-E, combined telecom/data outlets (or drops) must be wired end-to-end in the VA's 568A configuration. See: TIA/EIA568B, 1 & 2, TIA/EIA569B, TIA/EIA606A, and ANSI/TIA/EIA607A standards.

2. All combined telecom/data drops (or outlets) shall consist of three (3) each, CAT6-E, drops (or workstation receptacles) on different colored, "home run-cables," terminated at the workstation end on separate CAT6-RJ45 jacks. Each data drop will include at least 12" of slack in the wall and a 15 ft service loop above the wall, in addition to the 8 ft service loop for each data drop within the Telecommunications room overhead ladder rack. The three (3) CAT6-RJ45 jacks shall each be a different color.

Example: 1 each CAT6, combined telecom/data drop triplex drop has one Red RJ45, one white RJ45, and one blue RJ45 jack corresponding to one each of a CAT6-E cable of that same color.

3. The three colors of cable used must match the color of cables currently installed in

The building for the purpose and must remain consistent for all of them. The contractor shall provide the VAMC's COR (or designee) with test results for each of the cables in the combined, triplex, telecom/data drops plus, a "red-line = as-built drawing" showing routes and terminations which correspond to the test data for each of those terminated cables.

SEE TIA/EIA568B, 1 & 2, TIA/EIA569B, TIA/EIA606A, AND ANSI/TIA/EIA607A STANDARDS.

4. All CAT6-E cables for combined telecom/data outlets at the communications room end, must terminate on CAT6, 48 port-patch panels mounted in a floor mounted (6' x 19") equipment rack, leaving an 8 ft. Service loop coiled in the three (3) ft piece of ladder rack used to stabilize the equipment rack against the wall mounted backer board, at the top of the equipment rack. Contractor shall provide additional equipment racks as required. Velcro-strapping required as cable ties are no longer allowed for all cable management. The ladder rack supports and the 6' x 19" equipment rack must be adequately bonded and grounded, and should be placed so as to allow the best connectivity routes to both the Telephone company's entrance facility products whether they be copper or fiber optics.

SEE: TIA/EIA568B, 1 & 2, TIA/EIA569B, TIA/EIA606A, AND ANSI/TIA/EIA607A STANDARDS.

TELECOMMUNICATION ROOMS:

1. The Telecommunications Room which will house the Telephone Company's DEMARK is a Low Voltage facility and It should not be co-located with any High Voltage Power. On one wall it should have a wall mounted, 4' x 8' x ¾" plywood-backer board painted with Fire Resistant paint in a light color, hung horizontally, 3 ft above the finished floor. That size backer board should adequately hold the Telephone Company's DEMARK(s), DSU/CSUs for T1 or PRI circuits, Dialers for Security systems, etc. Telecom room should be located to ensure that any combined Telecom/Data outlets to be run from it, will not be any longer than 296'. See TIA/EIA568A, 1 & 2, TIA/EIA569B, TIA/EIA606A, and ANSI/TIA/EIA607A standards.

2. The Telecommunications Room should have sufficient space (usually about 8' x 8' in size and should not be co-located with other facility infrastructure. i.e. (Electrical Power, Plumbing, Heat & AC, Fire Alarm Systems, etc.) The telecomm room will contain the Telephone company demark and will provide best connectivity routes to one (1) owner supplied 19" x 6' telecomm rack with wire/cable management. The Telecommunications Room should have adequate 110V/125V and 220/240V power on dedicated circuits to give one quad receptacle(110V-20A) and one receptacle(220V) for use to power a UPS system which will run the VAMC's Cisco ™ equipment, a phone Company's DSU/CSU, etc. The Telecom Room must also have adequate lighting and adequate environmental controls. i.e. (Ventilation, AC, temperature & humidity, etc.) The entire Telephone Entrance Facility must be bonded and grounded. See TIA/EIA568A, 1 & 2, TIA/EIA569B, TIA/EIA606A, and ANSI/TIA/EIA607A standards.

2. Telecommunications Rooms must be secure and should have no dropped Ceilings. They should have adequate wall and floor penetrations, with sleeves that can be fire stopped properly, but still allow for proper maintenance of cables bend radii, as well as adequate support for the structured cables to workstations. ALL penetrations must be fire stopped to meet National Electrical Code and all conduits are not to exceed maximum fill capacity. The Telecommunications Room should have no water in the room, overhead, or adjacent (such as, overhead pipes or drains, sprinkler heads, water tanks) See TIA/EIA568B, 1 & 2, TIA/EIA569A, TIA/EIA606A, and ANSI/TIA/EIA607A standards.

3. The Telecommunications Room (at remote clinics) must be secured by being keyed to a Non-Mastered Key, separate from all other keys in the facility. The Owner must submit a set of two (2) keys to the COR of the Lessee, for delivery to the VA Medical Center's IRM Service. Security is the priority issue which dictates that no Telecomm Room may be co-located with any other facility infrastructure. i.e. (Electrical Power, Plumbing, Heat & AC, Security & Fire Alarm Systems, etc.) See TIA/EIA568A, 1 & 2, TIA/EIA569B, TIA/EIA606A, and ANSI/TIA/EIA607A standards.

Updated: May 1, 2012

Reviewed: 3/6/2014

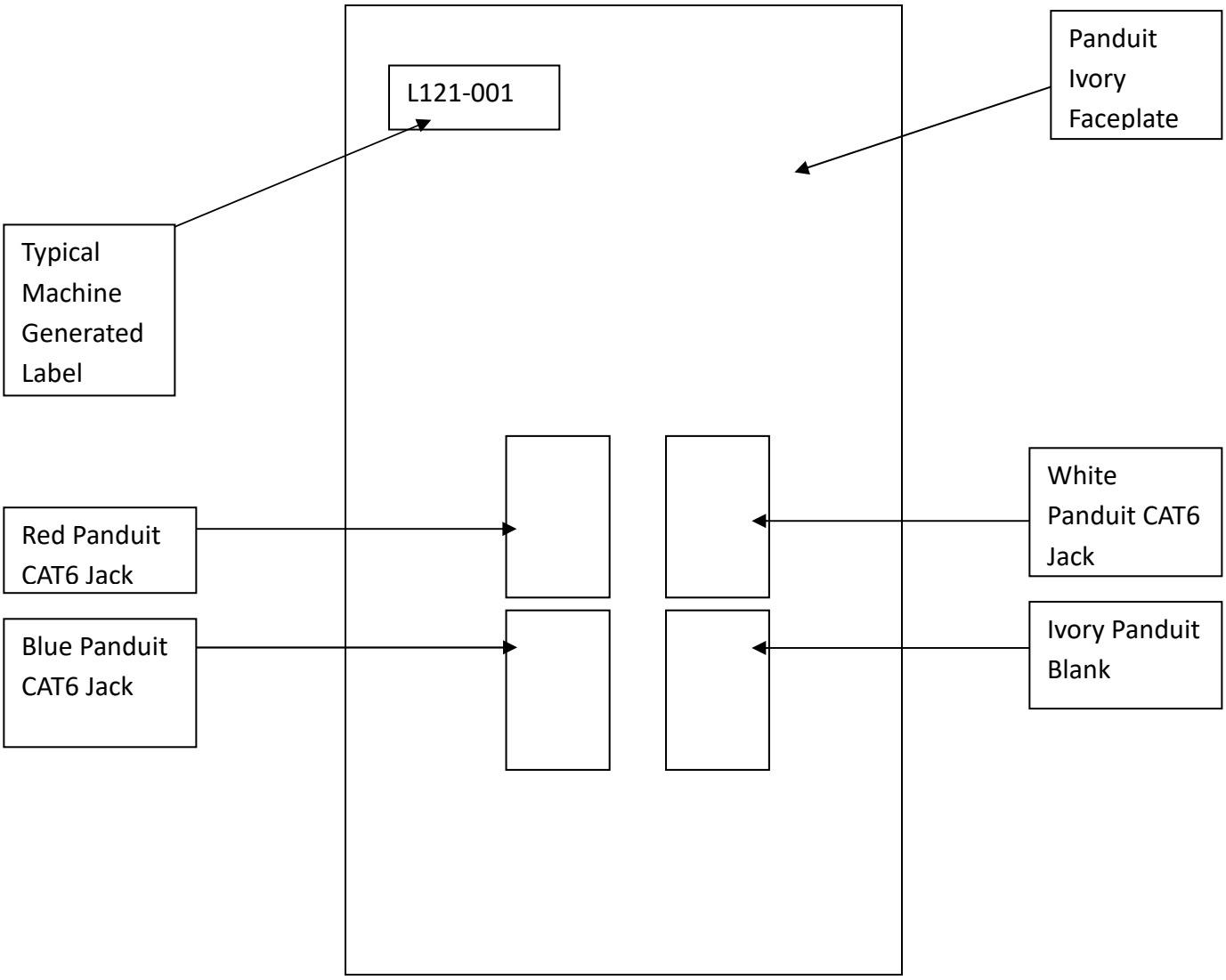
James H. Quillen VA Medical Center

Typical Faceplate Layout for Combined Telecomm

And Data Tri-Plex Drops

MEDICAL CENTER REQUIREMENTS

00 10 11-36


L121-001
Panduit Ivory Faceplate
Typical Machine Generated Label
Red Panduit CAT6 Jack
Blue Panduit CAT6 Jack
White Panduit CAT6 Jack
Ivory Panduit Blank

SECTION 00 10 11

JAMES H. QUILLEN VA MEDICAL CENTER REQUIREMENTS

ATTACHMENTS

A Pre-Construction Conference Checklist

B Contractor ID Badge and Parking Permit Request

C After Working Hours Activity Security Request

D Contractor Key Request

E Permit for Road Closure

F Daily Log

G Fire Safety Log

H Request to Disarm Fire Alarm/Sprinkler System

I Contractor/Subcontractor/Employee Notification of Asbestos

J Hot Work Permit

K Confined Space Entry Permit

L Ceiling Opening Permit

Penetration Permit
M

Item Title
Page

ATTACHMENTS

Attachment 00 10 11-A

PRE-CONSTRUCTION CONFERENCE CHECK LIST

1. AUTHORITY OF GOVERNMENT PERSONNEL / CONTACT INFO

( ) a. The James H. Quillen Veterans Affairs Medical Center, Mountain Home, TN, Contracting Officer is the only person authorized to legally bind the U.S. Government. The Contracting Officer is responsible for the contractor's compliance with all the terms and conditions of the contract.

( ) b. The Contracting Officer's Technical Representative (COR) is responsible for the inspection of the work called for in the contract and specifications. The purpose of the COR is technical supervision and acceptance. Pursuant to the delegation of authority, the COR does not have the authority to make changes to the contract in amount or time. Inspections made by the COR are for the sole benefit of the Government, and do not relieve the Contractor of any quality control responsibility.

( ) c. No other office or individual has authority to act in any manner in behalf of the U.S. Government on the performance of this contract. Any changes or questions regarding this contract will be referred to the Contracting Officer by the COR who, in turn, will initiate necessary action.

2. INITIAL SUBMITTALS / REQUESTS

( ) a. - Contractor’s Company Environmental Safety and Health Plan (ES & H);

Activity Hazard Analysis (AHA) detailing the project’s Site-Specific ES & H measures and a Site Specific Fire Safety / Infection Control Plan, **(Actual Drawings depicting all ILSM issues, etc.)**

- Contractor I.D. Badge and Parking Permit Request (See Section 00 10 11, Attachment B), for all contractor/sub-contractor employees.

- Phasing Schedule.

- Identify the Contractor's Superintendent.

- Identify the Contractor's Competent Person(s).

- A request to schedule a date and time for all contactor and sub-contractor's employees to view the VA's mandatory Video on Infection Control and to receive a safety orientation.

- OSHA Training Records for all such employees. (30-hour for the Superintendent, 10 hour for all other)

3. SCHEDULE / WORKING HOURS / PHASING SCHEDULES

( ) a. The Contractor shall submit a Schedule of Work and any specified Phasing Schedules not later than (5) five calendar days prior to commencement of work.

( ) b. The Contractor will perform all work during normal duty hours that are from 7:30 a.m. to 4:30 p.m., Monday through Friday, with the exception of Federal holidays, unless otherwise specified or required by the phasing requirements of this contract. If Phasing requires after hours work, submit a After Working Hours Activity Security Request (See Section 00 10 11, Attachment C).

( ) c. The Contractor will be required to schedule some aspects of the work involving sub-contractors of the Electrical, Mechanical, HVAC trades, and some special painting and floor finish operations, after hours, meaning from 5:00 pm until 5:00 am, whether indicated on the contract documents by specific phasing or not. Some after-hours work such as systems affecting Hospital operations cannot start until after 7:30 pm in the evening. This is required to assure un-interruption of Hospital operations,

potential effect to patients, employees, and visitors. **The Contractor shall be required to verify this before bidding.**

4. SECURITY CLEARANCE/KEY ISSUE

( ) a. This Medical Center reserves the right to initiate certain Homeland Security clearance requirements for Contractors, subcontractors, and other outside vendors, as required. These requirements are subject to change without notice depending on the current threat level implemented by the Government. If security clearances are known to be required, the COR will advise the Contractor at the pre-construction conference.

( ) b. Only a limited number of keys will be issued to the Contractor. Contractor must request and submit a "Contractor Key Request" (See Section 00 10 11, Attachment D) for any required keys for any Engineering Service areas from the COR. The COR will advise the Contractor of the procedure to obtain the keys. The keys must be returned at the end of final inspection and/or punch list completion, or final payment will be delayed. If the Contractor loses a key, all areas that are keyed to that key will be re-keyed by the VA at the Contractor's expense.

5. ID BADGES/PARKING/TRAFFIC REGULATIONS

( ) a. All Contractor personnel who enter Medical Center property for this project shall obtain I.D. badges. Contractor personnel shall include employees, subcontractors, subcontractor employees, suppliers, and delivery personnel entering the Medical Center. This does not apply to suppliers and delivery personnel making deliveries to the VA warehouse loading dock only. Contractor personnel who enter the Medical Center on an intermittent, one day at a time basis shall obtain a Temporary Contractor badge. (See Section 00 10 11 for details) All others shall obtain a photo I.D. badge. Badges shall be worn above the belt at all times while on Medical Center property. Photo I.D. Badges may be obtained by completing the I.D. section of the Contractor I.D. Badge and Parking Permit Request (See Section 00 10 11, Attachment B).

( ) b. All Contractor personnel who park vehicles on Medical Center property for this project shall obtain VA issued parking permits from the VA Police Service. This does not apply to suppliers and delivery personnel making deliveries to the VA warehouse loading dock only. Contractor I.D. Badge and Parking Permit Request (See Section 00 10 11, Attachment B)

( ) c. The Contractor will be assigned a parking area during the pre-construction conference. All Contractor personnel shall use only this area for parking while on Medical Center property. The Contractor shall not park on grassy areas, unless approved by the COR, and the Contractor agrees to restore areas back to VA standards.

( ) d. The Contractor must return all I.D. badges and parking permits to the VA Police Service or final payment will be delayed.

( ) e. See Section 00 10 11 for specific information on I.D. Badges, Parking, and Traffic Regulations. Failure to comply with these requirements will result in the immediate removal of Contractor personnel from this Medical Center. Any such Contractor personnel removed for failure to comply will not be permitted re-entry to work on this project until approved by the Contracting Officer.

6. SUPERVISION/SUPERINTENDENT/COMMUNICATIONS

( ) a. At all times during the performance of this contract, the Contractor's superintendent is to be available by cellular phone. At the beginning of the contract and prior to beginning any construction, supply the COR with the telephone number for the superintendent. The superintendent shall be capable of making decisions and acting on behalf of the Contractor. **The superintendent shall be English speaking, and an English-speaking foreman shall be physically located on the construction site at all times work is being performed on site.**

( ) b. The foreman, superintendent and/or other Contractor designee will be the Contractor's Compentent Person(s) as identified by OSHA. The Contractor's Competent Person(s) shall meet OSHA training guidelines and shall be capable of making decisions and acting on behalf of the Contractor. A Contractor Competent Person shall be on the job site at all times work is being performed. If the Contractor Competent Person is absent from the job site for an extended period of time, the VA Contracting Officer may send all Contractor/Subcontractor employees off the job.

7. USE OF GOVERNMENT-OWNED MATERIAL AND EQUIPMENT

( ) a. Use of Government-owned material and equipment is **prohibited.**

8. GOVERNMENT FURNISHED PROPERTY

( ) a. The Government-furnished property, if any, listed in the contract will be used only for the performance of this contract unless otherwise authorized by the Contracting Officer.

( ) b. The Contractor shall, at all times, take any and all steps necessary for maintenance and preservation of all Government-furnished property.

( ) c. The Contractor shall comply with all reasonable requests of the Contracting Officer to enclose or specially protect Government-furnished property.

9. CONTRACTOR'S TRAILERS

( ) a. Contractor's trailers shall be located at the area assigned. All utility connections to the trailer shall be installed at the contractor's expense. Trailer removal is required upon completion of the contract, unless approved by the COR to leave in place.

10. ROAD CLOSURES

( ) a. For any work requiring closure of a road or parking lot, the Contractor shall complete a Permit for Road Closure, (See Section 00 10 11, Attachment E), at least fourteen (14) days in advance, for approval by the COR and the Safety Unit.. Permits will be issued for no longer than one (1) week. Work lasting longer than one (1) week will be authorized by multiple permits.

( ) b. The Contractor shall supply and install any required road barricades and signage. The Contractor shall completely remove any road barricades and signage at the end of the permit.

11. DELIVERLY of MATERIALS

( ) a. Deliveries of materials and equipment are to be made at times when the Contractor and/or Subcontractor are available to accept. **The VA will not be responsible for accepting, receiving or storing** and will refuse and return deliveries.

12. STORAGE AREA / ACCESS ROADS / and DOCKS

( ) a. All storage will be confined to those areas designated by the COR.

( ) b. Only established roadways or those authorized for construction and loading and unloading docks authorized by the COR will be utilized. No restricted roadway or dock will be utilized except by special permission of the COR. (See item 10.) Weight limits recommended by the vehicle manufacturers or prescribed by the COR will be adhered to.

13. UTILITIES / OUTAGES

( ) a. The Contractor will verify that all utilities outside of the construction area are not affected prior to disconnecting or shutting off any utilities. All shutdowns will be coordinated with the COR at least seven (7) days prior to shut down.

14. EMERGENCY MEDICAL SERVICES

( ) a. Emergency medical services for stabilization purposes are available for contractors at this facility. For medical emergencies, dial 2-911 when inside any building. Report the nature of the emergency and location. The operator will dispatch in-house personnel or coordinate an outside emergency assistance based on the nature of the emergency.

15. ENVIROMENTAL PROTECTION / PROTECTION OF SURROUNDING AREAS

( ) a. It may help you to be aware of the seriousness that the environmental protection requirements of each contract are regarded. Adherence to these requirements is subject to continuing scrutiny from the community and backed

by severe penalties, such as fines and incarceration. These environmental requirements will be strictly enforced.

( ) b. No hazardous materials will be disposed of on Government property. All waste will be hauled off-site or disposed in contractor owned and operated waste removal containers.

( ) c. A copy of all waste manifests for special or hazardous wastes will be forwarded to the COR. Environmental requirements will be strictly enforced.

( ) d. Has the Contractor read and understood the information from Section 01 00 00 item 1.9?

16. SMOKING POLICY

( ) a. Smoking is not allowed in any building and only in designated outdoor areas, 50' feet away from buildings.

17. CONTRACT WORKER'S SAFETY INFORMATION

( ) a. Has the Contractor read and conveyed information from Section 00 10 11, to all employees and Sub-Contractors?

18. ACCIDENT PREVENTION

( ) a. The Contractor shall comply with the requirements for safety as described in Section 01 00 00, item 1.5.

19. INFECTION CONTROL ORIENTATION for CONSTRUCTION WORKERS

( ) a. Has the Contractor read and conveyed information from Sections 00 10 11 and 01 00 00 to all employees and Subcontractors?

20. ACCESS to CONSTRUCTION AREAS & INTERIM LIFE SAFETY MEASURES (ILSM)

( ) a. Has the Contractor read and understood the information from Section 00 10 11 and 00 10 10?

( ) b. Fire surveillance, conducted each day work is in progress by the Contractor, shall be documented in the Fire Safety Log. (See Section 00 10 11, Attachment G) The Contractor shall provide the completed Fire Safety Log to the COR upon request, but no later than the first working day of each month. The VA may do a fire surveillance of the construction site at any time. Fire watches are also documented on this log.

( ) c. The Contractor shall implement ILSMs, as required. The COR and/or members of the VA Construction Safety Team will evaluate the project for implementation of ILSMs. The Contractor shall also complete the Safety/ILSM Checklist side of the Daily Log (See Section 00 10 11, Attachment F).

( ) d. In order to comprehensively track potential infection control risks during construction, a "Ceiling Opening Permit" (Attachment L) will be issued by the medical center Infection Control Section only after construction workers have received the required infection control training. In addition, for medical center services that require frequent access to areas above ceilings, a "Ceiling Opening Permit" can be obtained on a long-term basis from the Infection Control Section once their employees have received the required infection control training.

( ) e. Means of egress shall be inspected each day work is in progress and documented by the Contractor on both the Daily Log and on the Fire Safety Log.

21. AIRBORNE DUST CONTROL DURING CONSTRUCTION

( ) a. Has the Contractor read and understood the information from Section 00 10 11?

22. INTERSTITIAL WORK PROTOCOL

( ) a. Has the Contractor read and understood the information from Section 00 10 11?

23. HOUSEKEEPING

( ) a. Has the Contractor read and understood the information from Section 00 10 11?

24. TRENCHING/EXCAVATIONS

( ) a. All Trenching and Excavation operations will comply with all applicable requirements of OSHA, 29 CFR 1926, Subpart P, for Excavating and Trenching, (including related appendices), 1926.800, Underground Construction, and 1926.956, Underground Lines.

25. HAZARDOUS MATERIALS (LBP, WASTE)

( ) a. It is the responsibility of the Contractor to notify the Contracting Officer promptly, and before such conditions are disturbed, when Lead Based Paint (LBP) is suspected. A laboratory analysis of suspected material will be completed at the direction of the Contracting Officer at Government expense. If the test proves to be positive, the VA may issue a separate contract to remove, abate, or otherwise render the hazard safe or the Contractor may be required to remove, abate or otherwise render the hazard safe. The Contractor will then submit a cost proposal to the Contracting Officer based on the findings.

( ) b. The Contractor will adhere to all Federal,State, and local rules, regulations, and policies concerning the purchase, use, storage, and disposal of hazardous materials and hazardous waste, incuding, but not limited to solvents, aerosols, and heavy metals. The Contractor will submit a list, along with the applicable Material Safety Data Sheet (MSDS), of all hazardous materials that will be used. Should a conflict arise concerning the rules, regulations, and policies, the Contractor will comply with the most stringent.

26. CONTACT WITH ASBESTOS CONTAINING MATERIALS (ACM)

( ) a. It is the responsibility of the Contractor to notify the Contracting Officer promptly and before such conditions are disturbed of the suspected presence of asbestos pursuant to FAR 52.233-1, Differing Site Conditions. A laboratory analysis of suspected material will be completed at the direction of the Contracting Officer at Government expense. If the test proves to be positive, the VA may issue a separate contract to abate the Asbestos or the Contractor may be required to hire a Certified Industrial Hygienist at Government expense. He will determine the method and the cost to remove the asbestos. The Contractor will then submit a cost proposal to the Contracting Officer based on the findings of the Certified Industrial Hygienist.

( ) b. To protect and ensure all your employees/Subcontractors are aware that asbestos containing materials have been used in the construction of this facility, you are required to have them review Section 00 10 11 item 30. You must also have them complete the Contractor/Subcontractor/Employee Notification of Asbestos (See Section 00 10 11, Attachment I). Submit this Notification to the COR prior to commencing work.

27. FLOURESCENT (PCB AND/OR MERCURY CONTAINING) FIXTURES

( ) a. The Contractor shall dispose of all fluorescent lighting fixtures removed as part of this project in accordance with Environmental Protection Agency (EPA) and Tennessee Department of Environment and Conservation (TDEC) regulations.

28. LOCK-OUT / TAG-OUT ENERGY CONTROL PROCEDURES

( ) a. The Contractor shall request a copy of the latest procedures pertaining to this Medical Center on Control of Hazardous Energy (Lock-Out / Tag-Out) from the COR, if work on energized circuits is required by this contract. The Contractor shall follow the procedures provided by the COR

( ) b. Contractors are expected to comply with OSHA 1910.147, Lock-out / Tag-out standard.

29. HOT WORK (CUTTING, WELDING, SOLDERING) PERMITS

( ) a. Any hot work operations including cutting, welding, thermal welding, brazing, soldering, grinding, thermal spraying, thawing pipes or any similar activity, will require a Hot Work Permit (See Section 00 10 11, Attachment J). The Contractor will be responsible for conforming to all Medical Center regulations, policies and procedures concerning Hot Work Permits as described in section 00 10 11.

30. PERMIT REQUIRED CONFINED SPACES

( ) a. Contractors performing work in confined spaces are responsible for compliance with all applicable standards and regulations. A Confined Space Entry Permit, (See Section 00 10 11, Attachment K) is required.

( ) b. The Contractor will be responsible for conforming to all Medical Center regulations, policies and procedures concerning Confined Spaces as described in section 00 10 11.

31. FIRE ALARMS / SPRINKLER SYSTEMS

( ) a. Has the Contractor read and understood Section 00 10 11, item 20?

( ) b. Do not tamper with or otherwise disturb any fire alarm and sprinkler system components without prior written permission. To do so without written permission will result in an adverse action by the VA.

( ) c. The contractor shall obtain written permission by submitting a Request to Disarm Fire Alarm / Sprinkler System, (See Section 00 10 11, Attachment H).

32. FIRE STOPPING

( ) a. Has the Contractor read and understood Section 00 10 11, item 21?

( ) b. Fire Stopping shall be provided for all penetrations in any wall, especially in vertical and horizontal fire/smoke partitions. If penetrations of smoke and fire barriers are to be made as part of this project, a "Penetration Permit" (Attachment M) must be requested and obtained from the COR responsible for the work. Once the penetration of the smoke or fire barrier has been made and properly sealed with fire stopping material, and the COR has verified same, the completed permit must be returned to the issuing party and the completed permit forwarded to the Safety Unit for verification. Copies of completed "Penetration Permits" will be maintained by the Safety Unit.

33. FIRE WATCH

( ) a. Has the Contractor read and understood Section 00 10 11, item 22?

( ) b. Fire watch surveillance conducted by the Contractor will be documented on the Fire Safety Log. (See Section 00 10 11, Attachment G)

34. SAFETY / INTERMEDIATE INSPECTIONS

( ) a. The professional Occupational Safety and Health staff (i.e. Safety Mgr.) at this facility will perform safety inspections of all contract operations. Written reports of unsafe practice conditions will be reported to the COR and Contracting Officer for immediate attention and resolution.

( ) b. The COR will perform other intermediate inspections as needed by the project scope or as requested by the Contractor.

35. CONTRACT PROGRESS AND COST SCHEDULES

( ) a. The contract requires that the Contractor submit, within ten (10) calendar days of Notice-to-Proceed, a Schedule of Costs and a Progress Schedule (See Clauses and 852.236-84 respectively). The progress chart (schedule) will be prepared in triplicate on VA Form 08-6159 "CONSTRUCTION PROGRESS CHART" (furnished by the procurement office) or equivalent format approved by the Contracting Officer. The chart will be submitted to the CONTRACTING OFFICER through the COR for approval. After approval a copy will

be returned to the Contractor. The progress chart for this contract is due to the Contracting Officer within 10 calendar days after receipt of Notice-to-Proceed.

( ) b. The Contractor is required to perform in accordance with the approved progress schedule. Failure of the Contractor to comply with these requirements may be cause for action under the General Conditions of this contract entitled "DEFAULT - (FAR 52.249-10)".

( ) c. The Progress schedule will be revised when individual or cumulative time extensions of 15 calendar days or more are granted for any reason.

36. LABOR STANDARDS PROVISIONS and PAYROLLS

( ) a. A copy of Rates and Wages, shall be kept posted by the Contractor at the site of work in a prominent place where it can be easily seen by the workers. All employees on the job should be informed of the posted schedule, their exact classification as listed in the schedule, and their rate of pay. All payroll submitted will show the exact classification of each employee as outlined in the "INSTRUCTIONS FOR SUBMISSION OF PAYROLLS AND INVOICES", attached to this checklist.

( ) b. Apprentices will be permitted to work only under a bona fide apprenticeship program. Concurrent with or prior to the first payroll on which an apprentice's name appears, a certificate of apprenticeship from a recognized council will be submitted to the Contracting Office. All payrolls which include apprentices will indicate classification and period of apprenticeship as outlined in "INSTRUCTIONS FOR SUBMISSION OF PAYROLLS AND INVOICES," attached to this checklist.

( ) c. Each payroll submitted by the prime contractor and each subcontractor must be accompanied by a fully executed "Statement of Compliance"' with the names of all subcontractors and whether or not they worked during the period being reported.

( ) d. Periodically the Contracting Officer, or the COR, will visit the project site to insure that all required items are posted and to interview personnel on the job to ascertain whether or not there is or has been any violation in regard to pay, classification, use of apprentice, etc.

( ) e. All employees must be paid time and one-half their basic rate of pay for all hours worked in excess of forty (40) hours in any one week.

37. WORKMAN'S COMPENSATION

( ) a. 1.66 WORKMEN'S COMPENSATION (VAAR 852.236-86) (July 2002) The Act of June 25, 1936, 49 Stat. 1938 (40 U.S.C. 290) authorizes the constituted authority of States to apply their workmen's compensation laws to all lands and premises owned or held by the United States.

38. SUBCONTRACTORS

( ) a. The Contractor will submit to the Contracting Officer two (2) copies of all subcontractors to be engaged on the work site, indicating name, address, and nature of work involved. The list of subcontractors to perform on this contract is due in the Contracting Office no later than 10 calendar days after receipt of notice to proceed.

39. LABOR DISPUTES

( ) a. The Contractor will immediately notify the Contracting Officer of any actual or potential labor dispute delaying or threatening to delay the timely performance of this contract.

40. EQUAL OPPORTUNITY

( ) a. An equal opportunity poster will be posted at all times at the construction site.

( ) b. When a review of performance is made, a review of compliance with the Equal Opportunity Clause will also be included. Special reviews may be conducted from time to time to determine progress, as well as to furnish educational data in connection with this program.

41. PROGRESS PAYMENTS

( ) a. Progress payment request shall be submitted in accordance with General Conditions.

( ) b. Progress reports will be completed monthly on the last workday of the month. The Contractor may advise the Contracting Officer on or about the 20th of the month on what percentage he thinks he is complete. Progress payments will be withheld pending input from the Contractor.

( ) c. If in the event the Government is dissatisfied with the Contractor's performance, a 10% retainage fee will be applied to all progress payments until completion and acceptance of the project.

( ) d. **Submit payment requests and any proposals for change order work with (rounded-off) dollar amounts to expedite paperwork and payment.**

( ) e. **Payment will not be made to the Contractor until reciept of all payrolls for the period covering the payment request.**

( ) f. Payment for Materials on Site (MOS) will be considered by the Contracting Officer in accordance with VAAR 852.236-82, Payment Under Fixed Price Construction Contracts of the General Conditions.

42. CHANGES

( ) a. The Contracting Officer, through information furnished by the COR, may make changes to the drawings and/or the specifications that are within the general scope of the contract. No other person is authorized to make any revisions, changes, or deletions under this contract.

( ) b. Use the "Change Order Cost Sheet", located at the end of this checklist, as a guide in determining your proposal breakdown requirements.

43. DAILY LOGS

( ) a. The Contractor will provide the COR with a written statement (daily) as directed in General conditions (VAAR 852.236-79, Daily Report of Workers and Materials). The Contractor shall use the Daily Log (See Section 00 10 11, Attachment F). The COR will use this plus his personal knowledge to develop his official Daily Log. He will also check the payrolls against the Daily Logs.

44. DIFFERING SITE CONDITIONS

( ) a. The Contractor shall promptly, before any such changed conditions are disturbed, notify the Contracting Officer in writing.

45. SPECIFICATION AND DRAWINGS

( ) a. In case of any differences the specifications will govern over the drawings. Any discrepancies should be brought to the immediate attention of the Contracting Officer.

46. REQUEST for INFORMATION

( ) a. **All Requests for Information (RFI's) shall be submitted in sequential order.**

47. TRANSMITTAL CORRESPONDENCE

( ) a. **All correspondence shall have project no., project name and contract no., sequentially numbered and dated.**

48. SUBMITTALS / MATERIAL APPROVAL

( ) a. Submittals, shop drawings, samples, etc., will be delivered to the Contracting Officer or as designated by the contract specifications. These will be forwarded to the COR for review, concurrence and approval. All

initial submittals are due within 30 calendar days of Notice to Proceed. Submit in accordance with Spec. Section 01 33 23, Samples and Shop Drawings. All submittals shall be covered by a "Transmittal Letter" from the General Contractor or they will be returned.

49. TESTS AND EXAMINATIONS

( ) a. Any test or examination called for will be performed in the presence of the Contracting Officer or his designated representative.

50. TRAINING of VA PERSONNEL

( ) a. Prior to installation of equipment in any given area, the Contractor will provide training to employees designated by the Contracting Officer. Ten days from receipt of the Notice to Proceed, the Contractor will provide a written training agenda.

51. OPERATION and MAINTENANCE MANUALS (O & M)

( ) a. The Contractor shall submit applicable specified O & M manuals prior to training of personnel in accordance with contract specifications.

52. CLEAN UP

( ) a. The Contractor's attention is invited to the General Condition entitled "CLEANING UP" (FAR 52.236-12). It is emphasized the Contractor must clean up the work area daily to the satisfaction of the COR and the Contracting Officer.

53. PHOTOGRAPHS

( ) a. Photographs will not be taken at the VA without written prior approval. Request for taking photographs must be submitted through the Contracting Officer to the Medical Center Director. Once approval is granted, Security Service will be notified and the Contracting Officer or his

representative will be present during the photographing. At the Contractor's expense, copies of any photographs taken at the VA will be furnished to the Contracting Officer and Engineering Service.

54. FINAL INSPECTION

( ) a. When the final inspection is to be held, it is the responsibility of the Contractor to set up an appointment with the Contracting Officer and the COR and arrange for a walk-through of the project. A representative of the Contractor shall be present at this walk-through.

( ) b. A written request fifteen (15) calendar days prior to actual final inspection is required. A representative of the Contractor shall be present at this final inspection.

55. PROJECT MEETINGS

( ) a. Periodic project meetings will be scheduled, as needed, if progress is not satisfactory, or anytime the Government or Contractor desire a meeting.

_____

CONTRACTING OFFICER DATE

_____

COR DATE

_____

CONTRACTOR DATE

INSTRUCTIONS FOR SUBMISSION OF PAYROLLS AND INVOICES

1. Two copies of all payrolls pertaining to the work (including payrolls of all subcontractors performing work on the job) will be submitted weekly to the procurement office by the prime contractor. Each such payroll must be accompanied by a fully executed CONTRACTOR'S WEEKLY PAYROLL STATEMENT, indicating that no deductions have been made from weekly wages of employees other than those authorized. The statements must be signed by person supervising payment.

2. The contract number and project number must be shown on each payroll.

3. Complete address, classification, straight time hours worked each day, total straight time hours worked in week, rate of pay, overtime hours worked each day, total overtime hours worked in week, overtime rate of pay, gross earnings, each deduction and net pay must be shown for each employee.

4. Employees must be classified within one of the classifications as shown on the Wage Rate Schedule of the contract. The exact classification, as shown on the Schedule which conforms to the work performed, must be shown on the payroll; that is, when a truck driver is shown, indicate type of vehicle listed in the Schedule under these headings; when a laborer is shown, indicate whether air tool operator, building, etc; when a welder is shown, list the craft to which the welding is incidental; when an electrician is shown, list the type and zone. Whenever a foreman or superintendent is listed show the class of workers he is supervising, such as electricians, plumbers, carpenters, etc., as his pay should be as much or more than those he supervises. Classifications not shown on Wage Rate Schedule contained in the contract will not be accepted. In those cases in which the contractor feels that the work performed by his employees will not conform with a craft shown in the Schedule, the problem shall be presented to the Contracting Officer.

5. All employees must be paid time and one-half their basic rate of pay for all hours worked in excess of 40 hours in any one week.

6. The prime contractor is responsible for the correct submission of his and subcontractor payrolls. The prime contractor must submit payrolls and/or statements for each week during the life of the contract. These weeks will begin with the week as listed on VA Form 08-6159, "Construction Progression Chart" for contracts of $10,000 or more and more than four (4) weeks, these weeks will begin with the week in which the "Notice to Proceed" is receipted.

For any week in which no work is performed by the prime contractor, only the "CONTRACTOR'S WEEKLY PAYROLL STATEMENT" need be submitted. These payrolls and/or statements will be numbered consecutively. The prime contractor will list, on the face of his form, the names of all approved subcontractors and whether or not they worked during this period (week). If any of the subcontractors did work during he period their payrolls and statements should accompany the prime contractor's payroll and/or statements. Each subcontractor needs to submit payrolls and statements only for those weeks in which he works, but these must be numbered consecutively.

7. All apprentices must be registered in a bona fide apprenticeship program, registered with a State Apprentice Agency recognized by the Federal Committee on Apprenticeship, U.S. Department of Labor. Evidence of such registration must be furnished to the procurement office prior to or together with submission of payroll on which apprentice's name first appears. If an apprentice is employed on such contract, and is not a registered apprentice, the contractor will be required to pay journeyman rates of the craft for which the employee was shown as apprentice. Also, period of apprenticeship under which the employee is serving must be indicated on the payroll.

8. Invoices shall be submitted in accordance with FAR Clause 52.232.27. The Contractor shall prepare and submit invoices to the designated billing office specified in the contract. A proper invoice must include the items listed in the subdivisions (a) (2) (i) through (a) (2) (ix) of this clause. If the invoice does not comply with these requirements, it shall be returned within seven (7) days after the date the designated billing office office received the invoice, with a statement of the reasons why it is not a proper invoice. Untimely notification will be taken into account in computing any interest penalty owed the Contractor in the manner described in subparagraph (a) (4) of this clause.

- Name and address of the contractor.
- Invoice date. (The Contractor is encouraged to date invoices as close as possible to the date of mailing or transmission.)
- Contract number or other authorization for work or services performed (including order number and contract line item number).
- Desription of work or services performed.
- Delivery and payment terms (e.g.,prompt payment discount terms).
- Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).

- Name (where practicable), title, phone number, and mailing address of person to be notified in the event of a defective invoice.
- For payments described in subdivision (a)(1)(i) of this clause, substantiation of the amounts requested and certification in accordance with the requirements of the clause at 52.232-5, payments Under Fixed-Price Construction Contracts.
- Any other information or documentation required by the contract.
- While not required, the Contractor is strongly encouraged to assign an identification number to each invoice.

CHANGE ORDER COST SHEET

THE FOLLOWING MAY BE USED AS A GUIDE IN DETERMINING YOUR PROPOSAL FOR A CHANGE ORDER - FOR USE BY GENERAL CONTRACTOR, refer to contract clauses FAR 52.243-4; VAAR 852.236-88(A); and VAAR 852.236-88(B) for additional guidance on changes.

1. MATERIAL: Include material list and line item cost. (Include tax)

_____

_____

_____

_____

_____

_____

2. LABOR_____man hours @_____per hour _____craft

_____man hours @_____per hour_____ _____craft

_____man hours @_____per hour _____craft

3. Other Costs (Identify)

__(i.e., equipment, rentals,etc.)_____

_____

_____

_____

_____

4. Sub-Total (Items 1, 2 and 3) _____

5. Overhead (0-10% of Item 4) _____

6. Total of Items 1,2 & 3) _____

7. Profit (0-10% of Item 6) _____

8. Payroll Tax/ Workmen's Comp./ Insurance _____

9. Total of Change order (items 4,5,7, +8) _____

Allowances for overhead and profit will not exceed 10% each. The Contractor must obtain and furnish with the proposal an itemized break-down signed by each subcontractor participating in the change if it exceeds $1000.

CONTRACTOR:_____ DATE:_____

RECEIVED BY:_____ DATE:_____

SUMMARY

Submit within the first 10 days of NTP:

Progress Chart (see example)

Submittals (copy of transmittal sheet to Contracting Officer)

Cost Breakdown on Contract Progress Report (Form 08-6001a)

List of Sub-Contractors & Construction Worker Listing

Material Safety Data Sheets (if applicable)

Copy of Contractor Certification or Permit (if applicable)

Contractor's Environmental, Safety, and Health Plan

Activity Hazard Analysis (AHA)

Site Specific Fire Safety / Infection Control Plan

Forms

(See Section 00 10 11 for forms. Forms not listed in Section 00 10 11 will be provided by Contracting Officer):

After Hours Request (indicate Bldg.)

After Hours Request (Security)

Barrier Type Requirements

Confined Space Entry

Hot Work Permit

Ceiling Opening Permit

Penetration Permit

Contractor ID Badge request Form

Contractor Key Request

Contractor Parking Permit request

Cost Estimate- VA Format

Daily Log (New Form 08-6131)

Interstitial Work Protocol

Life Safety Measures

Project Request for Information (RFI) Log

Project Request for Proposal (RFP)

Project Supplemental Agreement Log

Project Submittal Log

Project Submittal Summary

Cost Breakdown and Contract Progress

Report (Form 08-6159)

For Payment

Progress Payment Sheet (use enclosed format)

Payrolls

Daily Logs (submitted weekly to VA COR)

Updated Progress Chart (if applicable)

Contract Progress Report (08-6159)

Final Inspection

Notify the VA Project Mgr. / COR 15 days prior to requested date or contract completion date

Submit Red-Marked as-built drawing set

Submit O & M Manuals

Turn-in ID badges

Turn-in Keys

Clean-up all areas completely

Attachment 00 10 11-B

Contractor I.D. Badge and Parking Permit Request

Please Print all Information. (Must have a valid photo ID/State Drivers License)

Name of Contract: _____ Project Number: _____

Name of Company: _____

Telephone Number: _____ Expiration Date: _____

Name of Employee (Last): _____

(First): _____

(Middle): _____

Social Security Number: _____ Date of Birth_____

Sex: _____ Race: _____ Drivers **License Number: _____ State: ____**

Current Address (Street): _____

(City): _____

(State): _____

Vehicle Make: _____ Vehicle Model: _____ Year: _____ Color: _____

Vehicle Style (2dr, pickup, hatchback, etc.): _____ License Number: _____

State:_____

You will be required to wear your issued I.D. Badge, above the waist at all times while working on medical center property.

If your I.D. Badge is lost, you will be charged $____ for replacement.

I.D. Badges and Parking Permits are issued Monday through Thursday from 8 A.M. to 10 A.M. and 2 P.M. to 4 P.M.

Approving Official:

Print Name: _____

Signature: _____

Attachment 00 10 11-C

After Working Hours Activity Security Request

Date: _____

Hours: _____ – _____

There will be activity after working hours by the following Contractor(s):

_____

_____

_____

_____

_____

_____

Located in: Bldg #_____; Floor # _____; Wing _____; Room #_____

The following persons will be involved:

1. _____

2. _____

3. _____

4. _____

Superintendent in Charge: _____

Phone: _____

Pager: _____

Cell Phone: _____

You are directed to check in and out in Room-_____, with the Medical Center Police, who will assist as necessary.

_____, Project Manager

Cell Phone: _____

APPROVED: _____, Police/Security, ext. _____.

Special Instructions: Open locked doors as required.

Contractor Key Request

Date: _____

Contract No. _____ Project No. _____

Project Name: _____

Contractor Name: _____

Contractor Key Acceptance:

To: Contractor Supervisor: _____

You hereby accept the responsibility of the following keys to be under your control during the project. You are to return the keys upon completion as a punch list item. If the keys are not returned, a fee of $_____ (per key) will be charged against the contract for replacement fees. Your signature below acknowledges the above requirements.

KEY ISSUED	RESPONSIBLE SIGNATURE	PRINT NAME
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

_____

Project Manager

Copy to: File

Attachment 00 10 11-E

Permit for Road Closure

VA Project No: _____Date of Request: _____

Name of Contractor's Firm: _____

Date(s) of Requested Closure: _____

Time(s) of Requested Closure: _____

Location Description: _____

Work To Be Done: _____

_____

_____

_____

Protection Required (To be completed by Contracting Officer's Technical Representative):

___ Solid barricade with flashing lights to guard excavation site.

___ Warning cones and/or construction barrier tape.

___ Construction fencing.

___ Flag/attendant for directing traffic.

___ Cover excavation site with steel sheet to permit traffic flow after administrative work hours.

___ Other (describe).

COR Concurrence:
_____Date_____

Fire Department Approval:
_____Date_____

(Fire Department Officer who approves permit will contact on-duty Police Officer to inform of closure.)

(Original copy to be maintained in the Fire Department until completion of work. Once completed, return original to _____ for filing.)

VA Department of Veterans Affairs			
DAILY LOG – Formal Contract			**STATION**
PROJECT TITLE			**NAME OF CONTRACTOR**
DATE			**CONTRACT NUMBER**
DAY OF WEEK			**PROJECT NUMBER**
WEATHER			**TEMPERATURE**
BRANCH OF WORK	**SKILLED WORKERS**	**UNSKILLED WORKERS**	LOCATION AND DESCRIPTION OF WORK

DELIVERY OF MATERIALS:

REMARKS:

Signature of Construction Superintendent

_____

Signature of Project Manager

VA Department of Veterans Affairs	
DAILY LOG – Safety/ILSM Checklist	**STATION**
PROJECT TITLE	**NAME OF CONTRACTOR**
DATE	**CONTRACT NUMBER**
DAY OF WEEK	**PROJECT NUMBER**

Interim Life Safety Measure / Hazard Surveillance

Means of egress is clear in construction and adjacent areas.	☐ YES ☐ NO ☐ N/A
Access for the fire department and emergency services is clear.	☐ YES ☐ NO ☐ N/A
Status of the fire detection/sprinkler system:	
Fire sprinkler system is active.	☐ YES ☐ NO ☐ N/A
Fire alarm system is active.	☐ YES ☐ NO ☐ N/A
Smoke detectors are active.	☐ YES ☐ NO ☐ N/A
Temporary systems are in place.	☐ YES ☐ NO ☐ N/A
Construction partitions are being maintained and are smoke tight.	☐ YES ☐ NO ☐ N/A
Good housekeeping practices are being maintained.	☐ YES ☐ NO ☐ N/A
Exterior balconies, corridors and stairways are clear of storage	☐ YES ☐ NO ☐ N/A
Flammables and combustibles kept to a minimum and in proper containers.	☐ YES ☐ NO ☐ N/A
Buildings, grounds and equipment are maintained in a safe manner.	☐ YES ☐ NO ☐ N/A
Smoking regulations are being followed.	☐ YES ☐ NO ☐ N/A

Fire extinguishers are readily available in construction area.	☐ YES ☐ NO ☐ N/A
Hot work permit issued.	☐ YES ☐ NO ☐ N/A
Work site inspected after hot work.	☐ YES ☐ NO ☐ N/A
Other Environmental Considerations / Hazard Surveillance	
Caution/danger signs and barricades in place where needed.	☐ YES ☐ NO ☐ N/A
Lock out/tag out in place.	☐ YES ☐ NO ☐ N/A
Extension cords protected/disconnected at end of day.	☐ YES ☐ NO ☐ N/A
Dust barriers maintained and walk off mats provided.	☐ YES ☐ NO ☐ N/A
MSDS maintained on site and products labeled.	☐ YES ☐ NO ☐ N/A
Asbestos is properly controlled and interstitial doors are closed and locked.	☐ YES ☐ NO ☐ N/A
Area is secured from public and at the end of the day.	☐ YES ☐ NO ☐ N/A
Odors from construction operations are cleared.	☐ YES ☐ NO ☐ N/A
Safety and temporary signage is in place.	☐ YES ☐ NO ☐ N/A
Emergency recall numbers left at work site.	☐ YES ☐ NO ☐ N/A
Utility systems returned to operation in occupied areas.	☐ YES ☐ NO ☐ N/A
Construction storage/field offices maintained and secured.	☐ YES ☐ NO ☐ N/A
Excavations properly barricaded.	☐ YES ☐ NO ☐ N/A

All external openings in walls/roof are sealed from inclement weather.	☐ YES ☐ NO ☐ N/A
Exterior storm drains flushed and cleared of debris.	☐ YES ☐ NO ☐ N/A
Subcontractors aware/trained in safety/environmental issues.	☐ YES ☐ NO ☐ N/A

Remarks:

Inspected by:

Attachment 00 10 11-G

VA Department of Veterans Affairs		**FIRE SAFETY LOG**
MONTH: _____	YEAR: _____	INSTRUCTIONS: *CIRCLE "Y" OR "N" AS APPROPRIATE FOR EACH ITEM. NOTE ANY DEFICIENCIES AND CORRECTIVE ACTION ON NEXT PAGE. LEAVE OFF TOUR DAYS BLANK*

PROJECT TITLE: _____	PROJECT NUMBER: _____	CONTRACT NUMBER: _____

Day of Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
EXITS & PATHWAYS CLEARLY MARKED & UNOBSTRUCTED	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
FIRE EXTINGUISHERS IN PLACE.	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
EMERGENCY SERVICES ACCESS IS FREE & UNOBSTRUCTED	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
FIRE PROTECTION SYSTEMS IN OPERATION	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
MANUAL PULL STATIONS CLEAR & UNOBSTRUCTED	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
DEMOLITION DEBRIS REMOVED	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N

FLAMMABLES/CHEMICALS STORED PROPERLY & MSDS IS AVAILABLE	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
CONSTRUCTION AREA FIRE & DUST PARTITIONS ARE MAINTAINED & ARE EFFECTIVELY CONTROLLING DUST IN AREAS OUTSIDE PARTITIONS & "NO ADMITTANCE" SIGNAGE IN PLACE	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
SMOKING REGULATIONS BEING FOLLOWED	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
TOOLS/POWER CORDS INSPECTED	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
FIRE WATCH IMPLEMENTED	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N

INSPECTOR: (INITIALS): _____

VA Department of Veterans Affairs		
DATE	**DEFICIENCY**	**CORRECTIVE ACTION TAKEN**

REQUEST TO DISARM FIRE ALARM SYSTEM and/or SPRINKLER SYSTEM

Reason:

Area of Work (Zone and Room number):

Time Required:

Time to Begin / End Job function:

Date:

Comments:

Approval/ Signatures:

_____

SAFETY TECH. / FIRE INSP.

(REQUEST MUST BE IN THE COR’s or SAFETY OFFICE 24 HOURS BEFORE THE JOB BEGINS)

Contractor/Subcontractor/Employee Notification of Asbestos

THE DEPARTMENT OF VETERANS AFFAIRS MEDICAL CENTER LOCATED IN MOUNTAIN HOME, TN, WAS CONSTRUCTED DURING A PERIOD WHEN ASBESTOS WAS COMMONLY USED IN BUILDING MATERIALS.

THE MEDICAL CENTER HAS COMPLETED A SURVEY FOR ASBESTOS. ALL BUILDINGS CONTAIN SOME TYPE OF ASBESTOS (I.E., STEAM LINES, FLOOR TILES, CRAWL SPACES, ETC.).

IF YOU OR YOUR EMPLOYEE ENCOUNTERS SUSPECTED FRIABLE ASBESTOS OR CONDITIONS THAT MAY CAUSE SUSPECTED ASBESTOS TO BECOME FRIABLE, NOTIFY THE CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE (COR) IMMEDIATELY.

WHEN WORKING IN AREAS THAT ARE SUSPECTED OF HAVING ASBESTOS, RELOCATE EMPLOYEES AND PATIENTS FROM THE AREA UNTIL WORK IS COMPLETED.

IF THERE ARE ANY QUESTIONS, PLEASE FEEL FREE TO CONTACT THE COR AT EXT. _____.

THANK YOU FOR YOUR ASSISTANCE.

CONTRACTOR/SUBCONTRACTOR/EMPLOYEE SIGNATURE, PLEASE SIGN AND DATE BELOW AS ACKNOWLEDGEMENT OF THE ABOVE INFORMATION.

Employee Name	Contractor/Subcontractor	Date

Hot Work Permit

(Cutting and Welding with Portable Gas or Arc Equipment)

VA Project No: _____

Name of Contractor's
Firm: _____

Date: _____

Building/Location: _____

Work To Be
Done: _____

_____

_____

_____

Special Precautions:

_____

_____

Fire Watch Required: ____Yes ____No

The location where the work is to be performed has been examined, necessary precautions have been taken and permission is granted for this work.

Signed _____ (Safety Technician)

Permit Expires: _____ (Date)

Time Hot Work Started: _____ Time Hot Work Completed: _____

Final Check-Up:

Work area and all adjacent areas to which sparks and heat might have spread (including floors above and below and on opposite sides of walls) were inspected 30 minutes after the work was completed and were found fire safe.

Signed _____

(Contractor's Fire Watch)

Attention:

Before approving any cutting and welding permit, the contractor's authorized representative or their appointee shall inspect the work area and confirm that precautions have been taken to prevent fire in accordance with NFPA Standard No. 51B.

Interim Life Safety Measures/Precautions:

- Sprinklers are in service where installed.
- Cutting and welding equipment in good repair.
- Within 10 meters (30 feet); floors swept clean of combustible, non-combustible materials or flammable liquids, all wall and floor openings covered, and covers suspended beneath work to collect sparks.

- When working on enclosed equipment and in confined space, equipment and area is free of flammable vapors.
- Fire watch provided during and 30 minutes after operation (60 minutes for torch-applied roofing operations).
- Portable fire extinguisher with adequate rating available in the immediate vicinity.
- Standpipe system in service where installed.
- Protection of any sprinkler heads when hot work is in close proximity.
- Smoking prohibited in immediate vicinity.
- Non-combustible shields provided when hot work is done near combustible walls, partitions, floors, roofs.
- Prohibition of hot work on pipes contacting combustible walls.
- Personnel trained in use of equipment including portable fire extinguishers and sounding a fire alarm.
- Final check-up conducted after 30 minutes.

Confined Space Entry Permit

Date and Time Issued:_____ Date and Time Expires: _____

Job Site/Space I.D.: _____ Job Supervisor: _____

Equipment to be worked on: _____ Work to be performed:
_____

Stand-by
personnel: _____ _____ _____
_____

1. Atmospheric Checks: Time _____

Oxygen _____%

Explosive _____%
L.F.L.

Toxic _____PPM

2. Tester's Signature: _____

3. Source Isolation (No Entry):	N/A	Yes	No
Pumps or lines blinded,	_____	_____	_____
disconnected or blocked	_____	_____	_____

4. Ventilation Modification:	N/A	Yes	No
Mechanical	_____	_____	_____
Natural Ventilation only	_____	_____	_____

5. Atmospheric Check after Isolation and Ventilation:

Oxygen _____% > 19.5 %

Explosive _____% L.F.L < 10 %

Toxic _____PPM < 10 PPM H (2) S

Time _____

Tester's Signature:

_____

6. Communication Procedures:

_____

_____

7. Rescue Procedures:

_____

_____

_____

_____

8. Entry, Standby and Back-Up Persons:	Yes	No
Successfully completed required training?	_____	_____
Is it current?	_____	_____

9. Equipment:	N/A	Yes	No
Direct reading gas monitor tested	_____	_____	_____
Safety harnesses and lifelines for entry and standby persons	_____	_____	_____
Hoisting equipment	_____	_____	_____
Powered communications	_____	_____	_____
SCBA's for entry and standby persons	_____	_____	_____
Protective clothing	_____	_____	_____
All electric equipment listed	_____	_____	_____
Class I, Division I, Group D and Non-Sparking tools	_____	_____	_____

10. Periodic Atmospheric Tests:

Oxygen _____% Time_____ Oxygen _____% Time _____

Oxygen _____% Time_____ Oxygen _____% Time _____

Explosive _____% Time _____ Explosive _____% Time ____

Explosive ____% Time _____ Explosive _____% Time ____

Toxic ____% Time _____ Toxic _____% Time ____

Toxic ____% Time _____ Toxic _____% Time ____

We have reviewed the work authorized by this permit and the information contained here-in. Written instructions and safety procedures have been received and are understood. Entry cannot be approved if any squares are marked in the *No* column. This permit is not valid unless all appropriate items are completed.

Permit Prepared By: (Supervisor) _____

Approved By: (Unit Supervisor) _____

Reviewed By (Cs Operations Personnel):

_____ _____

(Printed name) (Signature)

This permit to be kept at job site. Return job site copy to Safety Office following job completion.

Copies: Safety Office (original)

COR

Job site

Permit Valid for 8 Hours Only. All Copies of Permit Will Remain at Job Site until Job is Completed.

Date: _____ Site Location and Description

_____

PURPOSE OF ENTRY

_____

SUPERVISOR(S) in Charge of Crews Type of Crew Phone #

_____

_____

COMMUNICATION PROCEDURES

_____

RESCUE PROCEDURES (PHONE NUMBERS AT BOTTOM)

_____

_____

* BOLD DENOTES MINIMUM REQUIREMENTS TO BE COMPLETED AND REVIEWED PRIOR TO ENTRY*

REQUIREMENTS COMPLETED	DATE	TIME
Lock Out/De-energize/Try-out	_____	_____
Line(s) Broken-Capped-Blanked	_____	_____
Purge-Flush and Vent	_____	_____
Ventilation	_____	_____
Secure Area (Post and Flag)	_____	_____
Breathing Apparatus	_____	_____
Resuscitator - Inhalator	_____	_____
Standby Safety Personnel	_____	_____
Full Body Harness w/"D" Ring	_____	_____
Emergency Escape Retrieval Equipment	_____	_____

Lifelines	_____	_____
Fire Extinguishers	_____	_____
Lighting (Explosive Proof)	_____	_____
Protective Clothing	_____	_____
Respirator(s) (Air Purifying)	_____	_____
Burning and Welding Permit	_____	_____
Note: Items that do not apply enter N/A in the blank.	_____	_____

***Record Continuous Monitoring Results Every 2 Hours*

Continuous Monitoring**	Permissible Entry Level							
Tests to be Taken								
Percent of Oxygen	19.5% to 23.5%	____	____	____	____	____	____	____	____
Lower Flammable Limit	Under 10%	____	____	____	____	____	____	____	____
Carbon Monoxide	+35 PPM	____	____	____	____	____	____	____	____
Aromatic Hydrocarbon	+1 PPM * 5 PPM	____	____	____	____	____	____	____	____
Hydrogen Cyanide	(Skin) * 4 PPM	____	____	____	____	____	____	____	____
Hydrogen Sulfide	+10 PPM * 15 PPM	____	____	____	____	____	____	____	____
Sulfur Dioxide	+2 PPM * 5 PPM	____	____	____	____	____	____	____	____
Ammonia	* 35 PPM	____	____	____	____	____	____	____	____

* Short-Term Exposure Limit: Employee can work in the area up to 15 minutes.

\+ 8 Hour Time Weighted Average: Employee can work in area 8 hours (longer with appropriate respiratory protection).

Remarks: _____

Attachment 00 10 11-K

Gas Tester Name & Check #	Instrument(s) Used	Model and/or Type	Serial and/or Unit #

Safety Standby Person Is Required for All Confined Space Work.

Safety Standby Person	Check #	Confined Space Entrant(s)	Check #	Confined Space Entrant(s)	Check #

Supervisor Authorizing – All Conditions Satisfied_____

Department/Phone _____

Ambulance _____

Fire _____

Safety _____

Gas Coordinator _____

Ceiling Opening Permit

Infection Control, James H. Quelled Veterans Affairs Medical Center, Mountain Home, TN

Definition: Opening a ceiling means to remove or alter any ceiling to gain access to the area above it. Examples are:

- Removing a portion of ceiling or an entire ceiling tile
- Drilling a hole in any ceiling
- Opening any access door

Scope: This long term permit is available to any VAMC department that routinely opens ceilings, such as:

- Biomedical Engineering
- Information Resources Management Service

Hazard: Mould spores, found in all dust, must be captured by barriers and/or HEPA vacuum, preventing entry to patient care environment. Any immunocompromized patient is at increased risk to fungal infection.

Note: Projects utilizing **outside contractors must** have an Infection Control Risk Assessment (ICRA) and training scheduled for their workers.

Type of Construction Project Activity (circle your task)	
Type A Inspection, Non-invasive	**Type B** Small scale, Short duration
• Removal of ceiling tiles for visual inspection **only** • Electrical trim work • Minor plumbing • No cutting of walls • No dust generation	• Installation of telephone and computer cabling • Access to chase spaces • Cutting of walls or ceiling where dust migration can be controlled

Patient Risk Groups (circle your risk area)			
Low Risk	**Medium Risk**	**High Risk**	**Highest Risk**
• Office areas • Classrooms • Meeting rooms • Atrium • Elevators • Warehouse • Laundry • Chapel	• Cardiology • Internal medicine • EKG • GI lab • Nuclear medicine • Physical medicine and rehabilitation (PT, OT, KT) • Radiology • CT scan • MRI • Respiratory therapy • Bronchoscopy lab • D1 • Ward E2 • Urology • Primary Care • Eye clinic • Domiciliary	• Emergency Room • Laboratory • Ward EG • Pharmacy • PACU • NHCU • Surgery clinic • Wound clinic • Dental • ENT clinic	• Ward CG • Ward C1 • SPD • ICU • PCU • OR • Hematology/Oncology Clinic • Chemotherapy

Infection Control Matrix (circle your class)			
	Type A	**Type B**	**Class I or II** work order tasks may be performed without formal
Low Risk	**I**	**II**	

Medium Risk	**I**	**II**	infection control risk assessment. Make an entry into the ceiling opening log furnished by Infection Control. This log will be inspected quarterly. **Call Infection Control (x7542) when the class is III or IV to schedule a risk assessment.**
High Risk	**I**	**II**	
Highest Risk	**II**	**III/IV**	

Ceiling Opening Long-Term Permit for Work Projects Class I and II

Issued to _____ Contact _____

Date Issued_____ Permit Expiration _____

Signed: _____,
Infection Control

Attachment 00 10 11-L

Ceiling Opening Log

Job #	Date	Location	Task	Dust Minimized Y/N	Performed by

Infection Control Quarterly Inspection by _____

Date _____

Attachment 00 10 11-M

JAMES H. QUILLEN VAMC

ENGINEERING DEPARTMENT

Penetration of Fire/Smoke Wall or Ceiling

"Permit"

Date: _____

Project # or Work Order #_____

Contractor: _____ Maintenance Unit: _____

Type of Barrier to be penetrated: Fire____ Smoke_____ (Mark as appropriate)

Specific Barrier to be penetrated:

Floor_____ Ceiling_____ Wall_____ (Mark as appropriate)

Location:
_____

Description of Work:

_____
_____

_____

Date Penetration to be made: _____ Date Penetration Complete:_____

Expected Duration of Opening _____

Sign Off: _____ _____OR _____ _____

(COR) Date (Maintenance Unit Supervisor) Date

Date Penetration Closed: _____

The penetration has been properly sealed:

COR or Maintenance Unit Supervisor _____

(Signature)

Permit to be returned to Engineering Safety section after penetration has been properly sealed.

Penetration and repair has been inspected and approved:

_____	_____	_____
Safety Section Rep	**Title**	**Date**

SECTION 01 00 00
GENERAL REQUIREMENTS

1 12/22/25

GENERAL

1.1 SAFETY REQUIREMENTS

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

1.2 GENERAL INTENTION

A. Contractor shall completely prepare areas shown on the drawings for building operations, including demolition and removal of existing finishes and assemblies, and furnish labor and materials and perform work for **the Tier 3 Infrastructure Upgrades (Main Computer Room Renovation) for the James H. Quillen VAMC** as required by drawings and specifications.

1 12/22/25

B. Visits to the site by Bidders may be made in accordance with what is listed in the solicitation and at the discretion of the Contracting Officer.

C. Offices of **SPUR**, 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 the Contractor, the Contractor shall notify the COR 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 workdays unless otherwise designated by the COR.

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.

1.3 STATEMENT OF BID ITEM(S)

A. ITEM I, BASE BID: Work includes general construction, alterations, necessary removal of existing assemblies and finishes and certain other items necessary for the installation of the new MCR.

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 so that security 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. Patients and staff are not to be photographed at any time.
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 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.

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.
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.

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. A limited number of permits shall be issued for General Contractor and its employees for parking in designated areas only. Contractor to coordinate with VA Medical Center Facility Manager.

1.6 OPERATIONS AND STORAGE AREAS (FAR 52.236-10)

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 determined by the COR.

E. Workers 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 COR where required by limited working space.
   1. Do not store materials and equipment in other than assigned areas.
   2. Schedule delivery of materials and equipment to immediate construction working areas within buildings in use by Department of Veterans Affairs in quantities sufficient for not more than two work days. Provide unobstructed access to Medical Center areas required to remain in operation.
   3. Where access by Medical Center personnel to vacated portions of buildings is not required, storage of Contractor's materials and equipment will be permitted subject to fire and safety requirements.

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 COR. All such actions shall be coordinated with the COR or Utility Company involved:

I. Phasing:
   1. 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:
   2. To ensure such executions, Contractor shall furnish the COR with a schedule of approximate dates on which the Contractor intends to accomplish work in each specific area of site, building or portion thereof. In addition, Contractor shall notify the COR two weeks in

advance of the proposed date of starting work in each specific area of site, building or portion thereof. Arrange such dates to ensure accomplishment of this work in successive phases mutually agreeable to Medical Center Director, COR and Contractor.

3. General Phasing Notes:
   a. Contractor shall coordinate all construction activities and allowable work hours (day/night/weekend) with VA representatives.
   b. Coordinate with AHJ regarding temporary life safety, egress, and fire protection provisions.
   c. If hazardous materials (e.g., asbestos, lead-based paint) are suspected or identified, contractor shall coordinate abatement with the VA environmental consultant.
   d. All phasing activities must account for maintaining continuous IT and telecommunications services to the facility throughout construction.
   e. Multiple phases may operate concurrently where required to ensure continuity and minimize disruptions.
   f. Contractor shall provide dust/dirt containment and ensure active telecom rooms and cabinets remain fully operational and protected throughout.
4. Phase I - Demolition and Preparation
   a. Vacate rooms as indicated in demolition drawings.
   b. Demolish existing walls, ceiling systems, plumbing, HVAC, electrical, and telecommunications infrastructure.
   c. Cut new door openings and infill existing openings as required.
   d. Apply fire/smoke sealants to penetrations.

e. Maintain existing cabling pathways where needed until replacement systems are installed.

5. Phase II – New MCR Construction
   a. Construct new 1-hour fire-rated walls for the Main Computer Room (MCR).
   b. Perform mechanical, electrical, telecom and fire protection rough-ins.
   c. Finish MCR interior surfaces to create sealed, clean-agent compatible environment.
   d. Verify enclosure continuity floor-to-deck above.
   e. Apply dust mitigation materials (gasketed tiles, caulking, epoxy coatings, etc.).
6. Phase III – Infrastructure Installation
   a. Install:
      1) Redundant UPS systems (Liebert Vertiv APM2 or approved equal), dual A/B feed;
      2) Overhead distribution busways with L21-20 tap boxes;
      3) MDA and HAD cabinets (partial);
      4) Cable tray and raceway systems;
      5) Bonding and grounding (TIA-607-D compliant);
      6) Security, lighting, CRU units on raised stands.
   b. All systems sized per ultimate design capacity.
7. WAN Demarcation & Carrier Cutovers
   a. Install fiber optic cabling, geo-diversely routed from each of the two exchange carrier’s point of presence in the existing Demarc Room (Telecom A006) to the new MCR.
   b. These links shall extend the WAN demarcation point to the new MCR.
   c. If new cabinets have not been installed prior to fiber optic cabling from Demarc is installed, provide

service loop and enclosure for fiber optic cabling to keep safe during construction until which time the fiber optic cabling can be terminated.

d. Coordinate with the Local Exchange Carriers (LEC) for service handoff, splicing, and termination requirements.

e. Label fiber type, termination points, and routing on final telecom drawings.

8. Phase IV - Network Migration, Testing, & Commissioning

a. Core Switch Migration

Phase 1: Deploy Core A in new MCR. Create a temporary interconnect ("umbilical") to Core B in the existing MCR to maintain network redundancy.

Phase 2: Migrate Core B to new MCR. Complete permanent dual-core configuration.

1) Migration Window: The migration of cabling from the existing MCR to the new MCR for the Telecommunications Rooms shall be completed within the designated 90-day migration window.

2) Core Switch Continuity: The core switches shall not remain split or in a transitional configuration beyond the 90-day window. All associated connectivity must be fully migrated and operational within this period.

b. Backbone Fiber Migration

1) Extend backbone fiber from existing MCR to new MCR, to be done while backbone for respective Core switches which feed the backbone is being deployed to new MCR.

2) Use existing pathways where possible.

3) Re-terminate or fusion splice existing fibers to meet TIA-568 and HEFP standards.
4) When necessary, deploy temporary parallel backbone routes to avoid service disruption.
5) All fiber cabling to be labeled on both ends per VA OIT standards.

c. Equipment Migration

1) Coordinate migration of network/server equipment cabinet mounted equipment (e.g., Cerner FDSS, IaaMS, Biomed).
2) Prior to move, inventory cabinet contents, validate destination cabinet locations and power (dual L21-20 feeds), and ensure UPS, CRU, bonding, and grounding are operational.
3) Migrate equipment during low-usage windows to reduce impact.
4) Maintain service redundancy through temporary cross-patching and umbilical links.
5) Post-move: verify connectivity and operability before decommissioning legacy connections.

J. Network Infrastructure Method of Procedure

1. Overview – This Method of Procedure (MOP) outlines the sequencing, coordination, and execution of the network infrastructure migration to support the new Main Computer Room (MCR) at Mountain Home VAMC. The MOP includes:

Core switch cutover;
Backbone fiber rerouting and TR fiber optic cabling cutovers;
Cabinet and server migration;
WAN demarc extension;

Validation and commissioning .

This plan ensures uninterrupted network availability during migration and adherence to VA design and infrastructure standards.

2. Objectives

Maintain continuous operation of IT services during the transition;

Migrate core and distribution infrastructure with no unplanned downtime;

Comply with TIA-568, TIA-607-D, and VA Infrastructure Standard for Telecommunications Spaces ;

Ensure environmental readiness (power, cooling, grounding) before migration.

3. Pre-Migration Requirements

   a. Weekly Coordination Meetings

      1) Weekly migration planning meetings with VA OIT, COR, LEC, and Design/Build contractor;

      2) Confirm window of execution (off-hours/low network usage).

   b. Environmental Readiness Verification

      1) UPS systems installed and tested (A/B redundant);

      2) CRU units operational with N+1 redundancy;

      3) Busway power taps verified (L21-20 three-phase);

      4) Cabinets and racks installed, grounded, labeled.

   c. Equipment Inventory

      1) Cabinet-by-cabinet inventory including:

         Device hostnames

         Power source (A/B)

         Network uplinks

         Fiber terminations

Equipment dependencies

d. Stakeholder Approvals
   1) VA OIT sign-off on cutover plan and fallback procedure;
   2) COR approval on schedule and documentation.

e. Coordination Meetings
   1) Weekly migration planning meetings with VA OIT, COR, LEC, and Design/Build contractor;
   2) Confirm window of execution (off-hours/low network usage).

4. Migration Phases – Phase I – Core A Relocation and Activation in New MCR
   a. Tasks:
      1) Remove the existing Core A switch stack from its current location in the old MCR.
      2) Install the existing Core A equipment into a newly provided MDA cabinet within the newly constructed Main Computer Room (MCR.
      3) Establish temporary fiber “umbilical” link between Core A and Core B (in old MCR).
      4) Verify A/B logical redundancy across campus.
      5) Perform connectivity tests from Core A to all TRs.
   b. Fallback Plan: Keep Core B active; revert routing to existing MCR if needed.
   c. Validation: Ping tests, routing table verification, TR switch uplink status.
5. Migration Phases – Phase II – Backbone Fiber Extension to MCR
   a. Tasks:

1) Splice or re-terminate existing backbone fiber (from TRs) in existing MCR, in extended pathway to new MCR.
2) Install new fiber route to MCR (via dual paths if available).
3) Label and terminate in MDA patch panel.
4) Confirm new uplinks from TR to Core A.
5) Deploy temporary parallel backbone (if needed) for high-availability zones.
6) Validate loss budgets and conduct OTDR testing.

b. Fallback Plan: Maintain legacy fiber terminations in place until cutover complete.
c. Validation: OTDR, continuity check, uplink stability at each TR.

6. Migration Phases – Phase III – Cabinet & Server Migration
   a. Tasks for each cabinet scheduled:
      1) Power down equipment;
      2) Disconnect network uplinks (document MAC/port map);
      3) Move to new MCR location;
      4) Reconnect to pre-assigned L21-20 PDU (A/B) and fiber uplinks;
      5) Power up and test connectivity;
      6) Migrate Cerner FDSS, IaaMS, Biomed systems per designated racks;
      7) Replace cascaded UPS systems with standard dual-feed PDUs;
      8) Sequence moves to maintain service availability and minimize overlap.
   b. Fallback Plan: Retain rollback path to old MCR where possible.

c. Validation: Equipment boot verification, application response test, connectivity to WAN.

7. Migration Phases – Phase IV – Core B Migration and Final Core Stack Activation

a. Tasks:

1) Power down Core B in old MCR;

2) Relocate Core B to new MCR MDA cabinet;

3) Patch Core B to TR uplinks, Core A, and WAN edge routers

4) Update routing configurations to activate full dual-core functionality;

5) Remove temporary umbilical once both cores are confirmed active.

b. Fallback Plan: Revert to single-core operation via Core A if B fails to initialize.

Validation: Full mesh ping test, switch stack sync, redundant path verification.

K. Building No. 77 will be occupied during performance of work; but immediate areas of alterations will be vacated.

1. Contractor shall take all measures and provide all material necessary for protecting existing equipment and property in affected areas of construction against dust and debris, so that equipment and affected areas to be used in the Medical Centers operations will not be hindered. Contractor shall permit access to Department of Veterans Affairs personnel and patients through other construction areas which serve as routes of access to such affected areas and equipment. These routes whether access or egress shall be isolated from the construction area by temporary partitions and have walking surfaces, lighting etc. to facilitate patient and staff access. Coordinate alteration work in areas occupied by Department of Veterans Affairs so that Medical Center operations will continue during the construction period.

2. Immediate areas of alterations not mentioned in preceding Subparagraph 1 will be temporarily vacated while alterations are performed.

L. 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 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.

M. 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. 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.

N. Abandoned Lines: All service lines such as wires, cables, conduits, ducts, pipes and the like, and their hangers or supports, shall be removed back to their source. Those which are indicated 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.

O. 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.

P. 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 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 COR.

B. Any items required by drawings to be either reused or relocated or both, found during this survey to be nonexistent, or in opinion of COR, 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).

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 workers 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 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 COR.
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.

1.9 PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS (FAR 52.236-9)

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 workers, 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.

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 workers 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 "DIFFERING SITE CONDITIONS" (FAR 52.236-2).

1.11 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 ensure 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.

1.12 WARRANTY MANAGEMENT

A. Warranty Management Plan: Develop a warranty management plan which contains information relevant to FAR 52.246-21 Warranty of Construction at least 30 days before the planned pre-warranty conference, submit two sets of the warranty management plan. Include within the warranty management plan all required actions and documents to assure that the Government receives all warranties to which it is entitled. The plan must be in narrative form and contain sufficient detail to render it suitable for use by future maintenance and repair personnel, whether tradesman, or of engineering background, not necessarily familiar with this contract. The term "status" as indicated below must include due date and whether item has been submitted or was approved. Warranty information made available during the construction phase must be submitted to the Contracting Officer for approval prior to each monthly invoice for payment. Assemble approved information in a binder and turn over to the Government upon acceptance of the work. The construction warranty period will begin on the date of the project acceptance and continue for the product warranty period. A joint 4 month and 9 month warranty inspection will be conducted, measured from time of acceptance, by the Contactor and the Contracting Officer. Include in the warranty management plan, but not limited to, the following:

1. Roles and responsibilities of all personnel associated with the warranty process, including points of contact and telephone numbers within the company of the Contractor, subcontractors, manufacturers or suppliers involved.

2. Furnish with each warranty the name, address and telephone number of each of the guarantor's representatives nearest project location.
3. Listing and status of delivery of all Certificates of Warranty for extended warranty items, to include roofs, HVAC balancing, pumps, motors, transformers and for all commissioned systems such as fire protection and alarm systems, sprinkler systems and lightning protection systems, etc.
4. A list for each warranted equipment item, feature of construction or system indicating:
   a. Name of item.
   b. Model and serial numbers.
   c. Location where installed.
   d. Name and phone numbers of manufacturers and suppliers.
   e. Name and phone numbers of manufacturers or suppliers.
   f. Names, addresses and phone numbers of sources of spare parts.
   g. Warranties and terms of warranty. Include one-year overall warranty of construction, including the starting date of warranty of construction. Items which have extended warranties must be indicated with separate warranty expiration dates.
   h. Starting point and duration of warranty period.
   i. Summary of maintenance procedures required to continue the warranty in force.
   j. Cross-reference to specific pertinent Operation and Maintenance manuals.
   k. Organizations, names and phone numbers of persons to call for warranty service.
   l. Typical response time and repair time expected for various warranted equipment.
5. The plans for attendance at the 4 and 9-month post construction warranty inspections conducted by the government.
6. Procedure and status of tagging of all equipment covered by extended warranties.
7. Copies of instructions to be posted near selected pieces of equipment where operation is critical for warranty and/or safety reasons.

B. Performance & Payment Bonds: The Performance & Payment Bonds must remain effective throughout the construction period.

1. In the event the Contractor fails to commence and diligently pursue any construction warranty work required, the Contracting Officer will have the work performed by others, and after completion of the work, will charge the remaining construction warranty funds of expenses incurred by the Government while performing the work, including, but not limited to administrative expenses.
2. In the event sufficient funds are not available to cover the construction warranty work performed by the Government at the contractor's expenses, the Contracting Officer will have the right to recoup expenses from the bonding company.
3. Following oral or written notification of required construction warranty repair work, the Contractor shall respond in a timely manner. Written verification will follow oral instructions. Failure to respond will be cause for the Contracting Officer to proceed against the Contractor.

C. Pre-Warranty Conference: Prior to contract completion, and at a time designated by the Contracting Officer, the Contractor shall meet with the Contracting Officer to develop a mutual understanding with respect to the requirements of this section. Communication procedures for Contractor notification of construction warranty defects, priorities with respect to the type of defect, reasonable time required for Contractor response, and other details deemed necessary by the Contracting Officer for the execution of the construction warranty will be established/ reviewed at this meeting. In connection with these requirements and at the time of the Contractor's quality control completion inspection, furnish the name, telephone number and address of a licensed and bonded company which is authorized to initiate and pursue construction warranty work action on behalf of the Contractor. This point of contract will be located within the local service area of the warranted construction, be continuously available and be responsive to Government inquiry on warranty work action and status. This requirement does not relieve the Contractor of any of its responsibilities in conjunction with other portions of this provision.

D. Contractor's Response to Construction Warranty Service Requirements:

E. Following oral or written notification by the Contracting Officer, the Contractor shall respond to construction warranty service requirements in accordance with the "Construction Warranty Service Priority List"

and the three categories of priorities listed below. Submit a report on any warranty item that has been repaired during the warranty period. Include within the report the cause of the problem, date reported, corrective action taken, and when the repair was completed. If the Contractor does not perform the construction warranty within the timeframe specified, the Government will perform the work and back charge the construction warranty payment item established.

1. First Priority Code 1. Perform onsite inspection to evaluate situation, and determine course of action within 4 hours, initiate work within 6 hours and work continuously to completion or relief.
2. Second Priority Code 2. Perform onsite inspection to evaluate situation, and determine course of action within 8 hours, initiate work within 24 hours and work continuously to completion or relief.
3. Third Priority Code 3. All other work to be initiated within 3 work days and work continuously to completion or relief.
4. The "Construction Warranty Service Priority List" is as follows:
   a) Code 1-Life Safety Systems
      1) Fire suppression systems.
      2) Fire alarm system(s).
   b) Code 1-Air Conditioning Systems
      1) Air conditioning leak in part of the building, if causing damage.
      2) Air conditioning system not cooling properly.
   c) Code 1 Doors
      1) Interior, exterior personnel doors or hardware, not functioning properly, causing security, fire or safety problem.
   d) Code 3-Doors
      1) Interior/exterior personnel doors or hardware not functioning properly.
   e) Code 1-Electrical
      1) Power failure (entire area or any building operational after 1600 hours).
      2) Security lights.
      3) Smoke detectors.
   f) Code 2-Electrical

1) Power failure (no power to a room or part of building). Receptacle and lights not operational (in a room or part of building).

g) Code 1-Gas

1) Leaks and pipeline breaks.

h) Code 1-Heat

1) Power failure affecting heat.

i) Code 1-Plumbing

1) Hot water heater failure.

2) Leaking water supply pipes

j) Code 2-Plumbing

1) Flush valves not operating properly

2) Fixture drain, supply line or any water pipe leaking.

3) Toilet leaking at base.

k) Code 3- Plumbing

1) Leaky faucets.

l) Code 3-Interior

1) Floors damaged.

2) Paint chipping or peeling.

3) Casework damaged.

m) Code 1-Roof Leaks

1) Damage to property is occurring.

n) Code 2-Water (Exterior)

1) No water to facility.

o) Code 2-Water (Hot)

1) No hot water in portion of building listed.

p) Code 3

1) All work not listed above.

F. Warranty Tags: At the time of installation, tag each warranted item with a durable, oil and water-resistant tag approved by the Contracting Officer. Attach each tag with a copper wire and spray with a silicone waterproof coating. Also submit two record copies of the warranty tags showing the layout and design. The date of acceptance and the QC signature must remain blank until the project is accepted for beneficial occupancy. Show the following information on the tag.

Warranty Tags
Type of product/material
Model number
Serial number
Contract number
Warranty period from/to
Inspector's signature
Construction Contractor
Address
Telephone number
Warranty Contact
Address
Telephone number
Warranty response time priority code

1.13 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.

1.14 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 written approval and compliance with the following provisions:

1. Permission to use each unit or system must be given by COR in writing. If the equipment is not installed and maintained in accordance with the written agreement and following provisions, the COR will withdraw permission for use of the equipment.
2. Electrical installations used by the equipment shall be completed in accordance with the drawings and specifications to prevent damage to the equipment and the electrical systems, i.e. transformers, relays, circuit breakers, fuses, conductors, motor controllers and their overload elements shall be properly sized, coordinated and adjusted. Installation of temporary electrical equipment or devices shall be

in accordance with NFPA 70, National Electrical Code, (2014 Edition), Article 590, *Temporary Installations.* 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.

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.

D. Any damage to the equipment or excessive wear due to prolonged use will be repaired replaced by the contractor at the contractor’s expense.

1.15 TEMPORARY USE OF EXISTING ELEVATORS

A. Contractor will not be allowed the use of existing elevators. Outside type hoist shall be used by Contractor for transporting materials and equipment.

B. 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 COR for use of elevators. The COR will ascertain that elevators are in proper condition.

Contractor may use elevators for daily use at times to be designated by the COR and for special nonrecurring time intervals when permission is granted. Personnel for operating elevators will not be provided by the Department of Veterans Affairs.

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.
3. Place elevator in condition equal, less normal wear, to that existing at time it was placed in service of Contractor as approved by Contracting Officer.

1.16 TEMPORARY TOILETS

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

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

1.17 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, in compliance with code and as 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, and associated paraphernalia and repair restore the infrastructure as required.

C. 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.

D. 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 as per code. Water is available at no cost to the Contractor.
2. Maintain connections, pipe, fittings and fixtures and conserve water-use so none is wasted. Failure to stop leakage or other wastes will be cause for revocation (at COR discretion) of use of water from Medical Center's system.

1.18 NEW TELEPHONE EQUIPMENT

A. 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.

1.19 TESTS

A. As per specification section 23 05 93 the contractor shall provide a written testing and commissioning plan complete with component level, equipment level, sub-system level and system level breakdowns. The plan will provide a schedule and a written sequence of what will be tested, how and what the expected outcome will be. This document will be submitted for approval prior to commencing work. The contractor shall document the results of the approved plan and submit for approval with the as built documentation.

B. 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. 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 system 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.

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.

1.20 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.

1.21 GOVERNMENT-FURNISHED PROPERTY

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

B. Equipment furnished by Government to be installed by Contractor will be furnished to Contractor at the Medical Center.

C. Contractor shall be prepared to receive this equipment from Government and store or place such equipment not less than 90 days before Completion Date of project.
   1. *Storage space for equipment will be provided by the Government and the Contractor shall be prepared to unload and store such equipment therein upon its receipt at the Medical Center.

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.

1.22 RELOCATED ITEMS

A. Contractor shall disconnect, dismantle as necessary, remove and reinstall in new location, all existing items indicated by symbol "R" or otherwise shown to be relocated by the Contractor.

B. Perform relocation of such equipment or items at such times and in such a manner as directed by the COR.

C. Suitably cap existing service lines, such as steam, condensate return, water, drain, gas, air, vacuum and/or electrical, at the main 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.

- - - E N D - - -

SECTION 01 32 16.15
PROJECT SCHEDULES
(SMALL PROJECTS - DESIGN/BID/BUILD)

1 12/22/25

PART 1- GENERAL

1.1 DESCRIPTION:

A. The Contractor shall develop a Critical Path Method (CPM) plan and schedule demonstrating fulfillment of the contract requirements (Project Schedule) and shall keep the Project Schedule up-to-date in accordance with the requirements of this section and shall utilize the plan for scheduling, coordinating and monitoring work under this contract (including all activities of subcontractors, equipment vendors and suppliers). Conventional Critical Path Method (CPM) technique shall be utilized to satisfy both time and cost applications.

1.2 CONTRACTOR'S REPRESENTATIVE:

A. The Contractor shall designate an authorized representative responsible for the Project Schedule including preparation, review and progress reporting with and to the Contracting Officer's Representative (COR).

B. The Contractor's representative shall have direct project control and complete authority to act on behalf of the Contractor in fulfilling the requirements of this specification section.

C. The Contractor's representative shall have the option of developing the project schedule within their organization or to engage the services of an outside consultant. If an outside scheduling consultant is utilized, Section 1.3 of this specification will apply.

1.3 CONTRACTOR'S CONSULTANT:

A. The Contractor shall submit a qualification proposal to the COR, within 10 days of bid acceptance. The qualification proposal shall include:

1. The name and address of the proposed consultant.
2. Information to show that the proposed consultant has the qualifications to meet the requirements specified in the preceding paragraph.
3. A representative sample of prior construction projects, which the proposed consultant has performed complete project scheduling services. These representative samples shall be of similar size and scope.

B. The Contracting Officer has the right to approve or disapprove the proposed consultant, and will notify the Contractor of the VA decision

within seven calendar days from receipt of the qualification proposal. In case of disapproval, the Contractor shall resubmit another consultant within 10 calendar days for renewed consideration. The Contractor shall have their scheduling consultant approved prior to submitting any schedule for approval.

1.4 COMPUTER PRODUCED SCHEDULES

1 12/22/25

A. Computer-Produced Schedules shall be created with Microsoft Project.

B. The contractor shall provide monthly, to the Department of Veterans Affairs (VA), all computer-produced time/cost schedules and reports generated from monthly project updates. This monthly computer service will include: three copies of up to five different reports (inclusive of all pages) available within the user defined reports of the scheduling software approved by the Contracting Officer; a hard copy listing of all project schedule changes, and associated data, made at the update and an electronic file of this data; and the resulting monthly updated schedule in PDM format. These must be submitted with and substantively support the contractor's monthly payment request and the signed look ahead report. The COR shall identify the five different report formats that the contractor shall provide.

C. The contractor shall be responsible for the correctness and timeliness of the computer-produced reports. The Contractor shall also responsible for the accurate and timely submittal of the updated project schedule and all CPM data necessary to produce the computer reports and payment request that is specified.

D. The VA will report errors in computer-produced reports to the Contractor's representative within ten calendar days from receipt of reports. The Contractor shall reprocess the computer-produced reports and associated diskette(s), when requested by the Contracting Officer's representative, to correct errors which affect the payment and schedule for the project.

1.5 THE COMPLETE PROJECT SCHEDULE SUBMITTAL

A. Within 45 calendar days after receipt of Notice to Proceed, the Contractor shall submit for the Contracting Officer's review; three blue line copies of the interim schedule on sheets of paper 765 x 1070 mm (30 x 42 inches) and an electronic file in the previously approved CPM schedule program. The submittal shall also include three copies of a computer-produced activity/event ID schedule showing project

duration; phase completion dates; and other data, including event cost. Each activity/event on the computer-produced schedule shall contain as a minimum, but not limited to, activity/event ID, activity/event description, duration, budget amount, early start date, early finish date, late start date, late finish date and total float. Work activity/event relationships shall be restricted to finish-to-start or start-to-start without lead or lag constraints. Activity/event date constraints, not required by the contract, will not be accepted unless submitted to and approved by the Contracting Officer. The contractor shall make a separate written detailed request to the Contracting Officer identifying these date constraints and secure the Contracting Officer's written approval before incorporating them into the network diagram. The Contracting Officer's separate approval of the Project Schedule shall not excuse the contractor of this requirement. Logic events (non-work) will be permitted where necessary to reflect proper logic among work events, but must have zero duration. The complete working schedule shall reflect the Contractor's approach to scheduling the complete project. **The final Project Schedule in its original form shall contain no contract changes or delays which may have been incurred during the final network diagram development period and shall reflect the entire contract duration as defined in the bid documents.** These changes/delays shall be entered at the first update after the final Project Schedule has been approved. The Contractor should provide their requests for time and supporting time extension analysis for contract time as a result of contract changes/delays, after this update, and in accordance with Article, ADJUSTMENT OF CONTRACT COMPLETION.

B. Within 30 calendar days after receipt of the complete project interim Project Schedule and the complete final Project Schedule, the Contracting Officer or his representative, will do one or both of the following:
   1. Notify the Contractor concerning his actions, opinions, and objections.
   2. A meeting with the Contractor at or near the job site for joint review, correction or adjustment of the proposed plan will be scheduled if required. Within 14 calendar days after the joint review, the Contractor shall revise and shall submit three blue line

copies of the revised Project Schedule, three copies of the revised computer-produced activity/event ID schedule and a revised electronic file as specified by the Contracting Officer. The revised submission will be reviewed by the Contracting Officer and, if found to be as previously agreed upon, will be approved.

C. The approved baseline schedule and the computer-produced schedule(s) generated there from shall constitute the approved baseline schedule until subsequently revised in accordance with the requirements of this section.

1.6 WORK ACTIVITY/EVENT COST DATA

A. The Contractor shall cost load all work activities/events except procurement activities. The cumulative amount of all cost loaded work activities/events (including alternates) shall equal the total contract price. Prorate overhead, profit and general conditions on all work activities/events for the entire project length. The contractor shall generate from this information cash flow curves indicating graphically the total percentage of work activity/event dollar value scheduled to be in place on early finish, late finish. These cash flow curves will be used by the Contracting Officer to assist him in determining approval or disapproval of the cost loading. Negative work activity/event cost data will not be acceptable, except on VA issued contract changes.

B. The Contractor shall cost load work activities/events for the testing, balancing, and adjustment of various systems in accordance with the provisions in Article, FAR 52.232 - 5 (PAYMENT UNDER FIXED-PRICE CONSTRUCTION CONTRACTS) and VAAR 852.232 - Article 70 Without NAS-CPM for (PAYMENTS UNDER FIXED PRICE CONSTRUCTION).

C. In accordance with FAR 52.236 - 1 (PERFORMANCE OF WORK BY THE CONTRACTOR), the Contractor shall submit, simultaneously with the cost per work activity/event of the construction schedule required by this Section, a responsibility code for all activities/events of the project for which the Contractor's forces will perform the work.

D. The Contractor shall cost load work activities/events for all BID ITEMS including ASBESTOS ABATEMENT. The sum of each BID ITEM work shall equal the value of the bid item in the Contractors' bid.

1.7 PROJECT SCHEDULE REQUIREMENTS

A. Show on the project schedule the sequence of work activities/events required for complete performance of all items of work. The Contractor Shall:

1. Show activities/events as:
   a. Contractor's time required for submittal of shop drawings, templates, fabrication, delivery and similar pre-construction work.
   b. Contracting Officer's and Architect-Engineer's review and approval of shop drawings, equipment schedules, samples, template, or similar items.
   c. Interruption of VA Facilities utilities, delivery of Government furnished equipment, and rough-in drawings, project phasing and any other specification requirements.
   d. Test, balance and adjust various systems and pieces of equipment, maintenance and operation manuals, instructions and preventive maintenance tasks.
   e. VA inspection and acceptance activity/event with a minimum duration of five work days at the end of each phase and immediately preceding any VA move activity/event required by the contract phasing for that phase.
2. Show not only the activities/events for actual construction work for each trade category of the project, but also trade relationships to indicate the movement of trades from one area, floor, or building, to another area, floor, or building, for at least five trades who are performing major work under this contract.
3. Break up the work into activities/events of a duration no longer than 20 work days each or one reporting period, except as to non-construction activities/events (i.e., procurement of materials, delivery of equipment, concrete and asphalt curing) and any other activities/events for which the COR may approve the showing of a longer duration. The duration for VA approval of any required submittal, shop drawing, or other submittals will not be less than 21 calendar days.
4. Describe work activities/events clearly, so the work is readily identifiable for assessment of completion. Activities/events labeled

"start," "continue," or "completion," are not specific and will not be allowed. Lead and lag time activities will not be acceptable.

5. The schedule shall be generally numbered in such a way to reflect either discipline, phase or location of the work.

B. The Contractor shall submit the following supporting data in addition to the project schedule:

1. The appropriate project calendar including working days and holidays.
2. The planned number of shifts per day.
3. The number of hours per shift.

Failure of the Contractor to include this data shall delay the review of the submittal until the Contracting Officer is in receipt of the missing data.

C. To the extent that the Project Schedule or any revised Project Schedule shows anything not jointly agreed upon, it shall not be deemed to have been approved by the COR. Failure to include any element of work required for the performance of this contract shall not excuse the Contractor from completing all work required within any applicable completion date of each phase regardless of the COR's approval of the Project Schedule.

D. Compact Disk Requirements and CPM Activity/Event Record Specifications: Submit to the VA an electronic file(s) containing one file of the data required to produce a schedule, reflecting all the activities/events of the complete project schedule being submitted.

1.8 PAYMENT TO THE CONTRACTOR:

A. Monthly, the contractor shall submit an application and certificate for payment using VA Form 10-6001a or the AIA application and certificate for payment documents G702 & G703 reflecting updated schedule activities and cost data in accordance with the provisions of the following Article, PAYMENT AND PROGRESS REPORTING, as the basis upon which progress payments will be made pursuant to Article, FAR 52.232 - 5 (PAYMENT UNDER FIXED-PRICE CONSTRUCTION CONTRACTS) and VAAR 852.232 - Article 70 Without NAS-CPM for (PAYMENTS UNDER FIXED PRICE CONSTRUCTION). The Contractor shall be entitled to a monthly progress payment upon approval of estimates as determined from the currently approved updated project schedule. Monthly payment requests shall include: a listing of all agreed upon project schedule changes and

associated data; and an electronic file (s) of the resulting monthly updated schedule.

B. Approval of the Contractor's monthly Application for Payment shall be contingent, among other factors, on the submittal of a satisfactory monthly update of the project schedule.

1.9 PAYMENT AND PROGRESS REPORTING

A. Monthly schedule update meetings will be held on dates mutually agreed to by the COR and the Contractor. Contractor and their CPM consultant (if applicable) shall attend all monthly schedule update meetings. The Contractor shall accurately update the Project Schedule and all other data required and provide this information to the COR three work days in advance of the schedule update meeting. Job progress will be reviewed to verify:

1. Actual start and/or finish dates for updated/completed activities/events.
2. Remaining duration for each activity/event started, or scheduled to start, but not completed.
3. Logic, time and cost data for change orders, and supplemental agreements that are to be incorporated into the Project Schedule.
4. Changes in activity/event sequence and/or duration which have been made, pursuant to the provisions of following Article, ADJUSTMENT OF CONTRACT COMPLETION.
5. Completion percentage for all completed and partially completed activities/events.
6. Logic and duration revisions required by this section of the specifications.
7. Activity/event duration and percent complete shall be updated independently.

B. After completion of the joint review, the contractor shall generate an updated computer-produced calendar-dated schedule and supply the Contracting Officer's representative with reports in accordance with the Article, COMPUTER PRODUCED SCHEDULES, specified.

C. After completing the monthly schedule update, the contractor's representative or scheduling consultant shall rerun all current period contract change(s) against the prior approved monthly project schedule. The analysis shall only include original workday durations and schedule logic agreed upon by the contractor and COR for the contract change(s).

When there is a disagreement on logic and/or durations, the Contractor shall use the schedule logic and/or durations provided and approved by the COR. After each rerun update, the resulting electronic project schedule data file shall be appropriately identified and submitted to the VA in accordance to the requirements listed in articles 1.4 and 1.7. This electronic submission is separate from the regular monthly project schedule update requirements and shall be submitted to the COR within fourteen (14) calendar days of completing the regular schedule update. Before inserting the contract changes durations, care must be taken to ensure that only the original durations will be used for the analysis, not the reported durations after progress. In addition, once the final network diagram is approved, the contractor must recreate all manual progress payment updates on this approved network diagram and associated reruns for contract changes in each of these update periods as outlined above for regular update periods. This will require detailed record keeping for each of the manual progress payment updates.

D. Following approval of the CPM schedule, the VA, the General Contractor, its approved CPM Consultant, RE office representatives, and all subcontractors needed, as determined by the SRE, shall meet to discuss the monthly updated schedule. The main emphasis shall be to address work activities to avoid slippage of project schedule and to identify any necessary actions required to maintain project schedule during the reporting period. The Government representatives and the Contractor should conclude the meeting with a clear understanding of those work and administrative actions necessary to maintain project schedule status during the reporting period. This schedule coordination meeting will occur after each monthly project schedule update meeting utilizing the resulting schedule reports from that schedule update. If the project is behind schedule, discussions should include ways to prevent further slippage as well as ways to improve the project schedule status, when appropriate.

1.10 RESPONSIBILITY FOR COMPLETION

A. If it becomes apparent from the current revised monthly progress schedule that phasing or contract completion dates will not be met, the Contractor shall execute some or all of the following remedial actions:

1. Increase construction manpower in such quantities and crafts as necessary to eliminate the backlog of work.
2. Increase the number of working hours per shift, shifts per working day, working days per week, the amount of construction equipment, or any combination of the foregoing to eliminate the backlog of work.
3. Reschedule the work in conformance with the specification requirements.

B. Prior to proceeding with any of the above actions, the Contractor shall notify and obtain approval from the COR for the proposed schedule changes. If such actions are approved, the representative schedule revisions shall be incorporated by the Contractor into the Project Schedule before the next update, at no additional cost to the Government.

1.11 CHANGES TO THE SCHEDULE

A. Within 30 calendar days after VA acceptance and approval of any updated project schedule, the Contractor shall submit a revised electronic file (s) and a list of any activity/event changes including predecessors and successors for any of the following reasons:

1. Delay in completion of any activity/event or group of activities/events, which may be involved with contract changes, strikes, unusual weather, and other delays will not relieve the Contractor from the requirements specified unless the conditions are shown on the CPM as the direct cause for delaying the project beyond the acceptable limits.
2. Delays in submittals, or deliveries, or work stoppage are encountered which make rescheduling of the work necessary.
3. The schedule does not represent the actual prosecution and progress of the project.
4. When there is, or has been, a substantial revision to the activity/event costs regardless of the cause for these revisions.

B. CPM revisions made under this paragraph which affect the previously approved computer-produced schedules for Government furnished equipment, vacating of areas by the VA Facility, contract phase(s) and sub phase(s), utilities furnished by the Government to the Contractor, or any other previously contracted item, shall be furnished in writing to the Contracting Officer for approval.

C. Contracting Officer's approval for the revised project schedule and all relevant data is contingent upon compliance with all other paragraphs of this section and any other previous agreements by the Contracting Officer or the VA representative.

D. The cost of revisions to the project schedule resulting from contract changes will be included in the proposal for changes in work as specified in FAR 52.243 - 4 (Changes, and will be based on the complexity of the revision or contract change, man hours expended in analyzing the change, and the total cost of the change.

E. The cost of revisions to the Project Schedule not resulting from contract changes is the responsibility of the Contractor.

1.12 ADJUSTMENT OF CONTRACT COMPLETION

A. The contract completion time will be adjusted only for causes specified in this contract. Request for an extension of the contract completion date by the Contractor shall be supported with a justification, CPM data and supporting evidence as the COR may deem necessary for determination as to whether or not the Contractor is entitled to an extension of time under the provisions of the contract. Submission of proof based on revised activity/event logic, durations (in work days) and costs is obligatory to any approvals. The schedule must clearly display that the Contractor has used, in full, all the float time available for the work involved in this request. The Contracting Officer's determination as to the total number of days of contract extension will be based upon the current computer-produced calendar-dated schedule for the time period in question and all other relevant information.

B. Actual delays in activities/events which, according to the computer- produced calendar-dated schedule, do not affect the extended and predicted contract completion dates shown by the critical path in the network, will not be the basis for a change to the contract completion date. The Contracting Officer will within a reasonable time after receipt of such justification and supporting evidence, review the facts and advise the Contractor in writing of the Contracting Officer's decision.

C. The Contractor shall submit each request for a change in the contract completion date to the Contracting Officer in accordance with the provisions specified under FAR 52.243 - 4 (Changes). The Contractor

shall include, as a part of each change order proposal, a sketch showing all CPM logic revisions, duration (in work days) changes, and cost changes, for work in question and its relationship to other activities on the approved network diagram.

D. All delays due to non-work activities/events such as RFI's, WEATHER, STRIKES, and similar non-work activities/events shall be analyzed on a month by month basis.

- - - E N D - - -

SECTION 01 33 24
ELECTRONIC SUBMITTAL PROCEDURES
(WEB-BASED SERVICE)

1 12/22/25

PART 1 - GENERAL

1.1 DESCRIPTION

A. This section specifies requirements for provision and use of an electronic, web-based service for submittal and tracking of construction submittals for the Project.

1.2 REFERENCED DOCUMENTS

A. Additional submittal requirements: Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.

1.3 SUMMARY:

A. The intent of electronic web-based submittals is to expedite the construction process by reducing paperwork, improving information flow, and decreasing turnaround time.

B. Shop drawing and product data submittals shall be transmitted to Architect in electronic (PDF) format using a web-based service designed specifically for transmitting and tracking submittals between construction team members.

C. The electronic submittal process is not intended for color samples, color charts, or physical material samples.

1.4 GENERAL DESCRIPTION OF PROCEDURES:

A. Submittal Preparation - Contractor may use any or all the following options:

1. Subcontractors and Suppliers provide electronic (PDF) submittals to Contractor via the submittal exchange website.
2. Subcontractors and Suppliers provide paper submittals to General Contractor who electronically scans and converts to PDF format.
3. Subcontractors and Suppliers provide paper submittals to Scanning Service which electronically scans and converts to PDF format.

B. Contractor shall review, comment, and apply electronic stamp certifying that the submittal (as noted) complies with the requirements of the Contract Documents including verification of manufacturer/product, dimensions and coordination of information with other parts of the work.

C. Contractor shall transmit each submittal to Architect and Owner (simultaneously) using the web-based submittal exchange service.

D. Architect/COR review comments will be made available on web-based submittal exchange service. Contractor shall receive email notice of completed review.

E. Distribution of reviewed submittals to subcontractors and suppliers is the responsibility of the Contractor.

1.5 REQUIREMENTS AND RESPONSIBILITIES

A. Submittal Exchange Service shall provide:

1. Web-based tracking and approval system.
2. Automated email notice for new submittals and reminders for submittals approaching the review deadline.
3. Tracking and exchange of ITC/RFI/CO's and other similar document as well as product and equipment submittals.
4. Means for tracking of the status such documents including whether they have been approved and released by the Owner.
5. Organized storage of submittals that is accessible for review by the designated construction team members at any time.
6. Submit a complete set of submittals on CD to the Owner at the end of the Project. Include all submittals included product submittals, shop drawings, ITC/RFI/CO's and other similar submittals.

B. Contractor responsibilities:

1. Training in the use of the service by the team members shall be at the option of the Contractor and, if chosen, shall be paid by the Contractor.
2. Contractor shall have or obtain required hardware and software: Internet Service and Equipment Requirements:
   a. Email address and Internet access at Contractor's main office.
   b. Adobe Acrobat (www.adobe.com), Bluebeam PDF Revu (www.bluebeam.com), or other similar PDF review software for applying electronic stamps and comments.
3. Contractor shall prepare or have prepared all required submittals in the PDF format required.
   a. PDF files must be readable. As a rule, a resolution of 300 dpi should be used.
   b. If the Architect can download more readable product data directly from the manufacturer's website than was submitted by the Contractor, the Architect shall reserve the right to reject the submittal.

4. Other responsibilities for submittals shall be as described in Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
   a. Color samples, color charts, or physical material samples shall be submitted as described in Section 01 33 23.

1.6 ACCEPTABLE SERVICES

A. Procore, no substitute.

- - - END - - -

SECTION 01 45 29
TESTING LABORATORY SERVICES 1 12/22/25

PART 1 - GENERAL

1.1 DESCRIPTION:

This section specifies materials testing activities and inspection services required during project construction to be provided by a Testing Laboratory retained by the General Contractor.

1.2 APPLICABLE PUBLICATIONS:

A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

B. American Association of State Highway and Transportation Officials (AASHTO):

T27-11.....Standard Method of Test for Sieve Analysis of Fine and Coarse Aggregates

T96-02 (R2006).....Standard Method of Test for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine

T99-10.....Standard Method of Test for Moisture-Density Relations of Soils Using a 2.5 Kg (5.5 lb.) Rammer and a 305 mm (12 in.) Drop

T104-99 (R2007).....Standard Method of Test for Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate

T180-10.....Standard Method of Test for Moisture-Density Relations of Soils using a 4.54 kg (10 lb.) Rammer and a 457 mm (18 in.) Drop

T191-02(R2006).....Standard Method of Test for Density of Soil In-Place by the Sand-Cone Method

T310-13.....Standard Method of Test for In-place Density and Moisture Content of Soil and Soil-aggregate by Nuclear Methods (Shallow Depth)

C. American Concrete Institute (ACI):

506.4R-94 (R2004).....Guide for the Evaluation of Shotcrete

D. American Society for Testing and Materials (ASTM):

A370-12.....Standard Test Methods and Definitions for Mechanical Testing of Steel Products

A416/A416M-10.....Standard Specification for Steel Strand, Uncoated Seven-Wire for Prestressed Concrete

C31/C31M-10.....Standard Practice for Making and Curing Concrete Test Specimens in the Field

C33/C33M-11a.....Standard Specification for Concrete Aggregates

C39/C39M-12.....Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens

C109/C109M-11b.....Standard Test Method for Compressive Strength of Hydraulic Cement Mortars

C136-06.....Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates

C138/C138M-10b.....Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete

C140-12.....Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units

C143/C143M-10a.....Standard Test Method for Slump of Hydraulic Cement Concrete

C172/C172M-10.....Standard Practice for Sampling Freshly Mixed Concrete

C173/C173M-10b.....Standard Test Method for Air Content of freshly Mixed Concrete by the Volumetric Method

C330/C330M-09.....Standard Specification for Lightweight Aggregates for Structural Concrete

C567/C567M-11.....Standard Test Method for Density Structural Lightweight Concrete

C780-11.....Standard Test Method for Pre-construction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry

C1019-11.....Standard Test Method for Sampling and Testing Grout

C1064/C1064M-11.....Standard Test Method for Temperature of Freshly Mixed Portland Cement Concrete

C1077-11c.....Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation

C1314-11a.....Standard Test Method for Compressive Strength of Masonry Prisms

D422-63(2007).....Standard Test Method for Particle-Size Analysis of Soils

D698-07e1.....Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort

D1140-00(2006).....Standard Test Methods for Amount of Material in Soils Finer than No. 200 Sieve

D1143/D1143M-07e1.....Standard Test Methods for Deep Foundations Under Static Axial Compressive Load

D1188-07e1.....Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples

D1556-07.....Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method

D1557-09.....Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000ft lbf/ft3 (2,700 KNm/m3))

D2166-06.....Standard Test Method for Unconfined Compressive Strength of Cohesive Soil

D2167-08).....Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method

D2216-10.....Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass

D2974-07a.....Standard Test Methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils

D3666-11.....Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials

D3740-11.....Standard Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as used in Engineering Design and Construction

D6938-10.....Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

E94-04(2010).....Standard Guide for Radiographic Examination

E164-08.....Standard Practice for Contact Ultrasonic Testing of Weldments

E329-11c.....Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection

E543-09.....Standard Specification for Agencies Performing Non-Destructive Testing

E605-93(R2011).....Standard Test Methods for Thickness and Density of Sprayed Fire Resistive Material (SFRM) Applied to Structural Members

E709-08.....Standard Guide for Magnetic Particle Examination

E1155-96(R2008).....Determining FF Floor Flatness and FL Floor Levelness Numbers

F3125/F3125M-15.....Standard Specification for High Strength Structural Bolts, Steel and Alloy Steel, Heat Treated, 120 ksi (830 MPa) and 150 ksi (1040 MPa) Minimum Tensile Strength, Inch and Metric Dimensions

E. American Welding Society (AWS):

D1.D1.1M-10.....Structural Welding Code-Steel

1.3 REQUIREMENTS:

A. Accreditation Requirements: Construction materials testing laboratories must be accredited by a laboratory accreditation authority and will be required to submit a copy of the Certificate of Accreditation and Scope of Accreditation. The laboratory's scope of accreditation must include the appropriate ASTM standards (i.e.; E329, C1077, D3666, D3740, A880, E543) listed in the technical sections of the specifications. Laboratories engaged in Hazardous Materials Testing shall meet the requirements of OSHA and EPA. The policy applies to the specific laboratory performing the actual testing, not just the "Corporate Office."

B. Inspection and Testing: Testing laboratory shall inspect materials and workmanship and perform tests described herein and additional tests requested by Resident Engineer. When it appears materials furnished, or work performed by Contractor fail to meet construction contract requirements, Testing Laboratory shall direct attention of Resident Engineer to such failure.

C. Written Reports: Testing laboratory shall submit test reports to Resident Engineer, Contractor, unless other arrangements are agreed to in writing by the Resident Engineer. Submit reports of tests that fail to meet construction contract requirements on colored paper.

D. Verbal Reports: Give verbal notification to Resident Engineer immediately of any irregularity.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 EARTHWORK: NOT USED

3.2 CONCRETE:

A. Batch Plant Inspection and Materials Testing:

1. Perform continuous batch plant inspection until concrete quality is established to satisfaction of Resident Engineer with concurrence of Contracting Officer and perform periodic inspections thereafter as determined by Resident Engineer.
2. Periodically inspect and test batch proportioning equipment for accuracy and report deficiencies to Resident Engineer.
3. Sample and test mix ingredients as necessary to insure compliance with specifications.
4. Sample and test aggregates daily and as necessary for moisture content. Test the dry rodded weight of the coarse aggregate whenever a sieve analysis is made, and when it appears there has been a change in the aggregate.
5. Certify, in duplicate, ingredients and proportions and amounts of ingredients in concrete conform to approved trial mixes. When concrete is batched or mixed off immediate building site, certify (by signing, initialing or stamping thereon) on delivery slips (duplicate) that ingredients in truck-load mixes conform to proportions of aggregate weight, cement factor, and water-cement ratio of approved trial mixes.

B. Field Inspection and Materials Testing:

1. Provide a technician at site of placement at all times to perform concrete sampling and testing.
2. Review the delivery tickets of the ready-mix concrete trucks arriving on-site. Notify the Contractor if the concrete cannot be placed within the specified time limits or if the type of concrete delivered is incorrect. Reject any loads that do not comply with the Specification requirements. Rejected loads are to be removed from the site at the Contractor's expense. Any rejected concrete that is placed will be subject to removal.
3. Take concrete samples at point of placement in accordance with ASTM C172. Mold and cure compression test cylinders in accordance with ASTM C31. Make at least three cylinders for each 40 m^3 (50 cubic yards) or less of each concrete type, and at least three cylinders for any one day's pour for each concrete type. After good concrete quality control has been established and maintained as determined by Resident Engineer make three cylinders for each 80 m^3 (100 cubic yards) or less of each concrete type, and at least three cylinders from any one day's pour for each concrete type. Label each cylinder with an identification number. Resident Engineer may require additional cylinders to be molded and cured under job conditions.
4. Perform slump tests in accordance with ASTM C143. Test the first truck each day, and every time test cylinders are made. Test pumped concrete at the hopper and at the discharge end of the hose at the beginning of each day's pumping operations to determine change in slump.
5. Determine the air content of concrete per ASTM C173. For concrete required to be air-entrained, test the first truck and every 20 m^3 (25 cubic yards) thereafter each day. For concrete not required to be air-entrained, test every 80 m^3 (100 cubic yards) at random. For pumped concrete, initially test concrete at both the hopper and the discharge end of the hose to determine change in air content.
6. If slump or air content fall outside specified limits, make another test immediately from another portion of same batch.
7. Perform unit weight tests in compliance with ASTM C138 for normal weight concrete and ASTM C567 for lightweight concrete. Test the first truck and each time cylinders are made.

8. Notify laboratory technician at batch plant of mix irregularities and request materials and proportioning check.
9. Verify that specified mixing has been accomplished.
10. Environmental Conditions: Determine the temperature per ASTM C1064 for each truckload of concrete during hot weather and cold weather concreting operations:
    a. When ambient air temperature falls below 4.4 degrees C (40 degrees F), record maximum and minimum air temperatures in each 24 hour period; record air temperature inside protective enclosure; record minimum temperature of surface of hardened concrete.
    b. When ambient air temperature rises above 29.4 degrees C (85 degrees F), record maximum and minimum air temperature in each 24 hour period; record minimum relative humidity; record maximum wind velocity; record maximum temperature of surface of hardened concrete.
11. Inspect the reinforcing steel placement, including bar size, bar spacing, top and bottom concrete cover, proper tie into the chairs, and grade of steel prior to concrete placement. Submit detailed report of observations.
12. Observe conveying, placement, and consolidation of concrete for conformance to specifications.
13. Observe condition of formed surfaces upon removal of formwork prior to repair of surface defects and observe repair of surface defects.
14. Observe curing procedures for conformance with specifications, record dates of concrete placement, start of preliminary curing, start of final curing, end of curing period.
15. Observe preparations for placement of concrete:
    a. Inspect handling, conveying, and placing equipment, inspect vibrating and compaction equipment.
    b. Inspect preparation of construction, expansion, and isolation joints.
16. Observe preparations for protection from hot weather, cold weather, sun, and rain, and preparations for curing.
17. Observe concrete mixing:
    a. Monitor and record amount of water added at project site.
    b. Observe minimum and maximum mixing times.

18. Measure concrete flatwork for levelness and flatness as follows:
    a. Perform Floor Tolerance Measurements F_F and F_L in accordance with ASTM E1155. Calculate the actual overall F- numbers using the inferior/superior area method.
    b. Perform all floor tolerance measurements within 48 hours after slab installation and prior to removal of shoring and formwork.
    c. Provide the Contractor and the Resident Engineer with the results of all profile tests, including a running tabulation of the overall F_F and F_L values for all slabs installed to date, within 72 hours after each slab installation.
19. Other inspections:
    a. Grouting under base plates.
    b. Grouting anchor bolts and reinforcing steel in hardened concrete.

C. Laboratory Tests of Field Samples:
1. Test compression test cylinders for strength in accordance with ASTM C39. For each test series, test one cylinder at 7 days and one cylinder at 28 days. Use remaining cylinder as a spare tested as directed by Resident Engineer. Compile laboratory test reports as follows: Compressive strength test shall be result of one cylinder, except when one cylinder shows evidence of improper sampling, molding or testing, in which case it shall be discarded and strength of spare cylinder shall be used.
2. Make weight tests of hardened lightweight structural concrete in accordance with ASTM C567.
3. Furnish certified compression test reports (duplicate) to Resident Engineer. In test report, indicate the following information:
    a. Cylinder identification number and date cast.
    b. Specific location at which test samples were taken.
    c. Type of concrete, slump, and percent air.
    d. Compressive strength of concrete in MPa (psi).
    e. Weight of lightweight structural concrete in kg/m^3 (pounds per cubic feet).
    f. Weather conditions during placing.
    g. Temperature of concrete in each test cylinder when test cylinder was molded.
    h. Maximum and minimum ambient temperature during placing.

i. Ambient temperature when concrete sample in test cylinder was taken.

j. Date delivered to laboratory and date tested.

3.3 REINFORCEMENT:

A. Review mill test reports furnished by Contractor.

3.4 STRUCTURAL STEEL:

A. General: Provide shop and field inspection and testing services to certify structural steel work is done in accordance with contract documents. Welding shall conform to AWS D1.1 Structural Welding Code.

B. Prefabrication Inspection:

1. Review design and shop detail drawings for size, length, type and location of all welds to be made.
2. Approve welding procedure qualifications either by pre-qualification or by witnessing qualifications tests.
3. Approve welder qualifications by certification or retesting.
4. Approve procedure for control of distortion and shrinkage stresses.
5. Approve procedures for welding in accordance with applicable sections of AWS D1.1.

C. Fabrication and Erection:

1. Weld Inspection:
   a. Inspect welding equipment for capacity, maintenance and working condition.
   b. Verify specified electrodes and handling and storage of electrodes in accordance with AWS D1.1.
   c. Inspect preparation and assembly of materials to be welded for conformance with AWS D1.1.
   d. Inspect preheating and interpass temperatures for conformance with AWS D1.1.
   e. Measure 25 percent of fillet welds.
   f. Welding Magnetic Particle Testing: Test in accordance with ASTM E709 for a minimum of:
      1) 20 percent of all shear plate fillet welds at random, final pass only.
      2) 20 percent of all continuity plate and bracing gusset plate fillet welds, at random, final pass only.

3) 100 percent of tension member fillet welds (i.e., hanger connection plates and other similar connections) for root and final passes.
4) 20 percent of length of built-up column member partial penetration and fillet welds at random for root and final passes.
5) 100 percent of length of built-up girder member partial penetration and fillet welds for root and final passes.

g. Welding Ultrasonic Testing: Test in accordance with ASTM E164 and AWS D1.1 for 100 percent of all full penetration welds, braced and moment frame column splices, and a minimum of 20 percent of all other partial penetration column splices, at random.

2. Bolt Inspection:
a. Inspect high-strength bolted connections in accordance AISC Specifications for Structural Joints Using ASTM F3125 Bolts.
b. Slip-Critical Connections: Inspect 10 percent of bolts, but not less than 2 bolts, selected at random in each connection in accordance with AISC Specifications for Structural Joints Using ASTM F3125 Bolts. Inspect all bolts in connection when one or more are rejected.
c. Fully Pre-tensioned Connections: Inspect 10 percent of bolts, but not less than 2 bolts, selected at random in 25 percent of connections in accordance with AISC Specification for Structural Joints Using ASTM F3125 Bolts. Inspect all bolts in connection when one or more are rejected.
d. Bolts installed by turn-of-nut tightening may be inspected with calibrated wrench when visual inspection was not performed during tightening.
e. Snug Tight Connections: Inspect 10 percent of connections verifying that plies of connected elements have been brought into snug contact.
f. Inspect field erected assemblies; verify locations of structural steel for plumbness, level, and alignment.

D. Submit inspection reports, record of welders and their certification, and identification, and instances of noncompliance to Resident Engineer.

3.18 TYPE OF TEST:

Testing frequency as determined by Contractor based on volume of material to be installed per Parts 3.2 and 3.4 of this specification.

- - - E N D - - -

SECTION 28 31 00
FIRE DETECTION AND ALARM

1 12/22/25

PART 1 - GENERAL

1.1 DESCRIPTION

A. This section of the specifications includes the furnishing, installation, and connection of the fire alarm equipment to form a complete coordinated system ready for operation. It shall include, but not be limited to, alarm initiating devices, alarm notification appliances, control units, fire safety control devices, annunciators, power supplies, and wiring as shown on the drawings and specified. The fire alarm system shall not be combined with other systems such as building automation, energy management, security, etc.

B. Fire alarm systems shall comply with requirements of the most recent VA FIRE PROTECTION DESIGN MANUAL and NFPA 72 unless variations to NFPA 72 are specifically identified within these contract documents by the following notation: "variation". The design, system layout, document submittal preparation, and supervision of installation and testing shall be provided by a technician that is certified NICET level III or a registered fire protection engineer. The NICET certified technician shall be on site for the supervision and testing of the system. Factory engineers from the equipment manufacturer, thoroughly familiar and knowledgeable with all equipment utilized, shall provide additional technical support at the site as required by the COTR or their authorized representative. Installers shall have a minimum of 2 years experience installing fire alarm systems. New fire alarm system components must be Simplex to allow for full integration with the existing system and the campus' existing network.

C. Fire alarm signals:

1. Building(s) as indicated on plans shall have an automatic digitized voice fire alarm signal with emergency manual voice override to notify occupants to evacuate. The digitized voice message shall identify the area of the building (smoke zone) from which the alarm was initiated.

2. Building(s) as indicated on plans shall have a general evacuation fire alarm signal in accordance with ASA S3.41 to notify all occupants in the respective building to evacuate.

D. Alarm signals (by device), supervisory signals (by device) and system trouble signals (by device not reporting) shall be distinctly transmitted to the main fire alarm system control unit located in the fire department.

1.2 SCOPE

A. A fully addressable fire alarm system as an extension of an existing addressable fire alarm system shall be designed and installed in accordance with the specifications and drawings. Device location and wiring runs shown on the drawings are for reference only unless specifically dimensioned. Actual locations shall be in accordance with NFPA 72 and this specification. New fire alarm system components must be Simplex to allow for full integration with the existing system and the campus' existing network.

B. All existing fire alarm equipment, wiring, devices and sub-systems that are not shown to be reused shall be removed. All existing fire alarm conduit not reused shall be removed.

C. Existing fire alarm bells, chimes, door holders, 120VAC duct smoke detectors, valve tamper switches and waterflow/pressure switches may be reused only as specifically indicated on the drawings and provided the equipment:

1. Meets this specification section
2. Is UL listed or FM approved
3. Is compatible with new equipment being installed
4. Is verified as operable through contractor testing and inspection
5. Is warranted as new by the contractor.

D. Existing 120 VAC duct smoke detectors, waterflow/pressure switches, and valve tamper switches reused by the Contractor shall be equipped with an addressable interface device compatible with the new equipment being installed.

E. Existing reused equipment shall be covered as new equipment under the Warranty specified herein.

F. Basic Performance:

1. Alarm and trouble signals from each building fire alarm control panel shall be digitally encoded by UL listed electronic devices onto a multiplexed communication system.
2. Response time between alarm initiation (contact closure) and recording at the main fire alarm control unit (appearance on alphanumeric read out) shall not exceed 5 seconds.
3. The signaling line circuits (SLC) between building fire alarm control units shall be wired Style B in accordance with NFPA 72. Isolation shall be provided so that no more than one building can be lost due to a short circuit fault.
4. Initiating device circuits (IDC) shall be wired Class B in accordance with NFPA 72.
5. Signaling line circuits (SLC) within buildings shall be wired Class B in accordance with NFPA 72. Individual signaling line circuits shall be limited to covering 22,500 square feet (2,090 square meters) of floor space or 3 floors whichever is less.
6. Notification appliance circuits (NAC) shall be wired Class B in accordance with NFPA 72.

1.3 RELATED WORK

A. Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES. Requirements for procedures for submittals.

B. Section 07 84 00 - FIRESTOPPING. Requirements for fire proofing wall penetrations.

C. Section 21 13 13 - WET-PIPE SPRINKLER SYSTEMS. Requirements for sprinkler systems.

D. Section 28 05 00 - COMMON WORK RESULTS FOR ELECTRONIC SAFETY AND SECURITY. Requirements for general requirements that are common to more than one section in Division 28.

E. Section 28 05 13 - CONDUCTORS AND CABLES FOR ELECTRONIC SAFETY AND SECURITY. Requirements for conductors and cables.

F. Section 28 05 26 - GROUNDING AND BONDING FOR ELECTRONIC SAFETY AND SECURITY. Requirements for grounding of equipment.

G. Section 28 05 28.33 - CONDUITS AND BACKBOXES FOR ELECTRONIC SAFETY AND SECURITY. Requirements for infrastructure.

H. Section 28 08 00, COMMISIONING OF ELECTRONIC SAFETY AND SECURITY SYSTEMS. Requirements for commissioning - systems readiness checklists, and training.

1.4 SUBMITTALS

A. General: Submit 5 copies in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES, and Section 26 05 11, REQUIREMENTS FOR ELECTRICAL INSTALLATIONS.

B. Drawings:

1. Prepare drawings using AutoCAD software and include all contractors information. Layering shall be by VA criteria as provided by the Contracting Officer's Technical Representative (COTR). Bid drawing files on AutoCAD will be provided to the Contractor at the pre-construction meeting. The contractor shall be responsible for verifying all critical dimensions shown on the drawings provided by VA.

2. Floor plans: Provide locations of all devices (with device number at each addressable device corresponding to control unit programming), appliances, panels, equipment, junction/terminal cabinets/boxes, risers, electrical power connections, individual circuits and raceway routing, system zoning; number, size, and type of raceways and conductors in each raceway; conduit fill calculations with cross section area percent fill for each type and size of conductor and raceway. Only those devices connected and incorporated into the final system shall be on these floor plans. Do not show any removed devices on the floor plans. Show all interfaces for all fire safety functions.

3. Riser diagrams: Provide, for the entire system, the number, size and type of riser raceways and conductors in each riser raceway and number of each type device per floor and zone. Show door holder interface, elevator control interface, HVAC shutdown interface, fire extinguishing system interface, and all other fire safety interfaces. Show wiring Styles on the riser diagram for all circuits. Provide diagrams both on a per building and campus wide basis.

4. Detailed wiring diagrams: Provide for control panels, modules, power supplies, electrical power connections, auxiliary relays and

annunciators showing termination identifications, size and type conductors, circuit boards, LED lamps, indicators, adjustable controls, switches, ribbon connectors, wiring harnesses, terminal strips and connectors, spare zones/circuits. Diagrams shall be drawn to a scale sufficient to show spatial relationships between components, enclosures and equipment configuration.

5. Two weeks prior to final inspection, the Contractor shall deliver to the COTR 3 sets of as-built drawings and one set of the as-built drawing computer files (using AutoCAD 2020 or later). As-built drawings (floor plans) shall show all new and/or existing conduit used for the fire alarm system.

C. Manuals:

1. Submit simultaneously with the shop drawings, companion copies of complete maintenance and operating manuals including technical data sheets for all items used in the system, power requirements, device wiring diagrams, dimensions, and information for ordering replacement parts.
   a. Wiring diagrams shall have their terminals identified to facilitate installation, operation, expansion and maintenance.
   b. Wiring diagrams shall indicate internal wiring for each item of equipment and the interconnections between the items of equipment.
   c. Include complete listing of all software used and installation and operation instructions including the input/output matrix chart.
   d. Provide a clear and concise description of operation that gives, in detail, the information required to properly operate, inspect, test and maintain the equipment and system. Provide all manufacturer's installation limitations including but not limited to circuit length limitations.
   e. Complete listing of all digitized voice messages.
   f. Provide standby battery calculations under normal operating and alarm modes. Battery calculations shall include the magnets for holding the doors open for one minute.
   g. Include information indicating who will provide emergency service and perform post contract maintenance.

h. Provide a replacement parts list with current prices. Include a list of recommended spare parts, tools, and instruments for testing and maintenance purposes.

i. A computerized preventive maintenance schedule for all equipment. The schedule shall be provided on disk in a computer format acceptable to the VAMC and shall describe the protocol for preventive maintenance of all equipment. The schedule shall include the required times for systematic examination, adjustment and cleaning of all equipment. A print out of the schedule shall also be provided in the manual. Provide the disk in a pocket within the manual.

j. Furnish manuals in 3 ring loose-leaf binder or manufacturer's standard binder.

k. A print out for all devices proposed on each signaling line circuit with spare capacity indicated.

2. Two weeks prior to final inspection, deliver 4 copies of the final updated maintenance and operating manual to the COTR.

a. The manual shall be updated to include any information necessitated by the maintenance and operating manual approval.

b. Complete "As installed" wiring and schematic diagrams shall be included that shows all items of equipment and their interconnecting wiring. Show all final terminal identifications.

c. Complete listing of all programming information, including all control events per device including an updated input/output matrix.

d. Certificate of Installation as required by NFPA 72 for each building. The certificate shall identify any variations from the National Fire Alarm Code.

e. Certificate from equipment manufacturer assuring compliance with all manufacturers installation requirements and satisfactory system operation.

D. Certifications:

1. Together with the shop drawing submittal, submit the technician's NICET level III fire alarm certification as well as certification from the control unit manufacturer that the proposed performer of contract maintenance is an authorized representative of the major equipment manufacturer. Include in the certification the names and

addresses of the proposed supervisor of installation and the proposed performer of contract maintenance. Also include the name and title of the manufacturer's representative who makes the certification.

2. Together with the shop drawing submittal, submit a certification from either the control unit manufacturer or the manufacturer of each component (e.g., smoke detector) that the components being furnished are compatible with the control unit.
3. Together with the shop drawing submittal, submit a certification from the major equipment manufacturer that the wiring and connection diagrams meet this specification, UL and NFPA 72 requirements.

1.5 WARRANTY

A. All work performed and all material and equipment furnished under this contract shall be free from defects and shall remain so for a period of one year from the date of acceptance of the entire installation by the Contracting Officer.

B. Complete inspection, testing, maintenance and repair service for the fire alarm system shall be provided by a factory trained authorized representative of the manufacturer of the major equipment for a period of 1 year from the date of acceptance of the entire installation by the Contracting Officer.

C. Contractor shall provide all necessary test equipment, parts and labor to perform required inspection, testing, maintenance and repair.

D. All inspection, testing, maintenance and permanent records required by NFPA 72, and recommended by the equipment manufacturer shall be provided by the contractor. Work shall include operation of sprinkler system alarm and supervisory devices as well as all reused existing equipment connected to the fire alarm system. It shall include all interfaced equipment including but not limited to elevators, HVAC shutdown, and extinguishing systems.

E. Maintenance and testing shall be performed in accordance with NFPA 72. A computerized preventive maintenance schedule shall be provided and shall describe the protocol for preventive maintenance of equipment. The schedule shall include a systematic examination, adjustment and cleaning of all equipment.

F. Non-included Work: Repair service shall not include the performance of any work due to improper use, accidents, or negligence for which the contractor is not responsible.

G. Service and emergency personnel shall report to the Engineering Office or their authorized representative upon arrival at the hospital and again upon the completion of the required work. A copy of the work ticket containing a complete description of the work performed and parts replaced shall be provided to the VA COTR or his authorized representative.

H. Emergency Service:

1. Warranty Period Service: Service other than the preventative maintenance, inspection, and testing required by NFPA 72 shall be considered emergency call-back service and covered under the warranty of the installation during the first year of the warranty period, unless the required service is a result of abuse or misuse by the Government. Written notification shall not be required for emergency warranty period service and the contractor shall respond as outlined in the following sections on Normal and Overtime Emergency Call-Back Service. Warranty period service can be required during normal or overtime emergency call-back service time periods at the discretion of the COTR or his authorized representative.

2. Normal and overtime emergency call-back service shall consist of an on-site response within 2 hours of notification of a system trouble.

1 12/22/25

3. Normal emergency call-back service times are between the hours of 7:30 a.m. and 4:00 p.m., Monday through Friday, exclusive of federal holidays. Service performed during all other times shall be considered to be overtime emergency call-back service. The cost of all normal emergency call-back service for the first year of this contract shall be included in the cost of this contract.

4. Overtime emergency call-back service shall be provided for the system when requested by the Government. The cost of the first 40 manhours per year of overtime call-back service during the first year of this contract shall be provided under this contract. Payment for overtime emergency call-back service in excess of the 40 man hours per year requirement will be handled through

separate purchase orders. The method of calculating overtime emergency call-back hours is based on actual time spent on site and does not include travel time.

I. The contractor shall maintain a log at each fire alarm control unit. The log shall list the date and time of all examinations and trouble calls, condition of the system, and name of the technician. Each trouble call shall be fully described, including the nature of the trouble, necessary correction performed, and parts replaced.

1.7 APPLICABLE PUBLICATIONS

A. The publications listed below (including amendments, addenda, revisions, supplements and errata) form a part of this specification to the extent referenced. The publications are referenced in text by the basic designation only and the latest editions of these publications shall be applicable.

B. National Fire Protection Association (NFPA):

NFPA 13 .....Standard for the Installation of Sprinkler Systems, 2025 edition

NFPA 70.....National Electrical Code (NEC), 2023 edition

NFPA 72.....National Fire Alarm Code, 2025 edition

C. NFPA 75.....Standard for the Fire Protection of Information Technology equipment, 2024 edition

D. NFPA 101.....Life Safety Code, 2024 edition

Underwriters Laboratories, Inc. (UL): Fire Protection Equipment Directory

E. Factory Mutual Research Corp (FM): Approval Guide, 2007-2011

F. American National Standards Institute (ANSI):

S3.41.....Audible Emergency Evacuation Signal, 1990 edition, reaffirmed 2008

PART 2 - PRODUCTS

2.1 EQUIPMENT AND MATERIALS, GENERAL

A. Existing non-addressable equipment may be reused only where indicated on the drawings. All addressable equipment and components shall be new and the manufacturer's current model. All equipment shall be tested and listed by Underwriters Laboratories, Inc. or Factory Mutual Research Corporation for use as part of a fire alarm system. The authorized representative of the manufacturer of the major equipment

shall certify that the installation complies with all manufacturer's requirements and that satisfactory total system operation has been achieved. New fire alarm system components must be Simplex to allow for full integration with the existing system and the campus' existing network.

2.2 CONDUIT, BOXES, AND WIRE

A. Conduit shall be in accordance with Section 28 05 28.33, CONDUIT AND BACKBOXES FOR ELECTRONIC SAFETY AND SECURITY and as follows:
   1. All new conduit shall be installed in accordance with NFPA 70.
   2. Conduit fill shall not exceed 40 percent of interior cross sectional area.
   3. All new conduit shall be 3/4 inch (19 mm) minimum.

B. Wire:
   1. Wiring shall be in accordance with NEC article 760, Section 28 05 13 CONDUCTORS AND CABLES FOR ELECTRONIC SAFETY AND SECURITY, and as recommended by the manufacturer of the addressable fire alarm system to extend an existing non-addressable system. All wires shall be color coded. Number and size of conductors shall be as recommended by the fire alarm system manufacturer, but not less than 18 AWG for initiating device circuits and 14 AWG for notification device circuits.
   2. Addressable circuits and wiring used for the multiplex communication loop shall be twisted and shielded unless specifically accepted by the fire alarm equipment manufacturer in writing.
   3. Any fire alarm system wiring that extends outside of a building shall have additional power surge protection to protect equipment from physical damage and false signals due to lightning, voltage and current induced transients. Protection devices shall be shown on the submittal drawings and shall be UL listed or in accordance with written manufacturer's requirements.
   4. All wire or cable used in underground conduits including those in concrete shall be listed for wet locations.

C. Terminal Boxes, Junction Boxes, and Cabinets:
   1. Shall be galvanized steel in accordance with UL requirements.
   2. All boxes shall be sized and installed in accordance with NFPA 70.
   3. covers shall be repainted red in accordance with Section 09 91 00, PAINTING and shall be identified with white markings as "FA" for

junction boxes and as "FIRE ALARM SYSTEM" for cabinets and terminal boxes. Lettering shall be a minimum of 3/4 inch (19 mm) high.

4. Terminal boxes and cabinets shall have a volume 50 percent greater than required by the NFPA 70. Minimum sized wire shall be considered as 14 AWG for calculation purposes.
5. Terminal boxes and cabinets shall have identified pressure type terminal strips and shall be located at the base of each riser. Terminal strips shall be labeled as specified or as approved by the COTR.

2.3 FIRE ALARM CONTROL UNIT

A. General:

1. A fully addressable fire alarm system used as an extension of an existing non-addressable fire alarm system shall be provided with a fire alarm control unit and shall operate as a supervised zoned fire alarm system. The addressable fire alarm control unit shall be interfaced with the existing non-addressable fire alarm control unit such that an alarm signal on one unit shall cause an alarm signal on the other unit. The addressable fire alarm control unit shall be located in the same room or space as the non-addressable fire alarm control unit.
2. Each power source shall be supervised from the other source for loss of power.
3. All circuits shall be monitored for integrity.
4. Visually and audibly annunciate any trouble condition including, but not limited to main power failure, grounds and system wiring derangement.
5. The new fire alarm control unit responsible for releasing system functionality must be fiber interfaced with the main building fire alarm control unit. Provide a new addressable panel that is compatible to interface with the existing system.

2.4 STANDBY POWER SUPPLY

A. Uninterrupted Power Supply (UPS):

1. The UPS system shall be comprised of a static inverter, a precision battery float charger, and sealed maintenance free batteries.

2. Under normal operating conditions, the load shall be filtered through a ferroresonant transformer.
3. When normal AC power fails, the inverter shall supply AC power to the transformer from the battery source. There shall be no break in output of the system during transfer of the system from normal to battery supply or back to normal.
4. Batteries shall be sealed, gel cell type.
5. UPS system shall be sized to operate the central processor, CRT, printer, and all other directly connected equipment for 5 minutes upon a normal AC power failure.

B. Batteries:

1. Battery shall be of the sealed, maintenance free type, 24-volt nominal.
2. Battery shall have sufficient capacity to power the fire alarm system for not less than 24 hours plus 5 minutes of alarm to an end voltage of 1.14 volts per cell, upon a normal AC power failure.
3. Battery racks shall be steel with an alkali-resistant finish. Batteries shall be secured in seismic areas 2B, 3, or 4 as defined by the Uniform Building Code.

C. Battery Charger:

1. Shall be completely automatic, with constant potential charger maintaining the battery fully charged under all service conditions. Charger shall operate from a 120-volt, 60 hertz emergency power source.
2. Shall be rated for fully charging a completely discharged battery within 48 hours while simultaneously supplying any loads connected to the battery.
3. Shall have protection to prevent discharge through the charger.
4. Shall have protection for overloads and short circuits on both AC and DC sides.
5. A trouble condition shall actuate the fire alarm trouble signal.
6. Charger shall have automatic AC line voltage regulation, automatic current-limiting features, and adjustable voltage controls.

2.5 ANNUNCIATION

A. Annunciator, Alphanumeric Type (System):

1. Shall be a supervised, LCD display containing a minimum of 2 lines of 40 characters for alarm annunciation in clear English text.

2. Message shall identify building number, floor, zone, etc on the first line and device description and status (pull station, smoke detector, waterflow alarm or trouble condition) on the second line.
3. Where the alarm originates on the non-addressable system, the addressable system shall indicate on the LCD display "SEE _____ FIRE ALARM CONTROL PANEL" where the blank is filled in with the make and model of the existing addressable fire alarm control panel.
4. The initial alarm received shall be indicated as such.
5. A selector switch shall be provided for viewing subsequent alarm messages.
6. The display shall be UL listed for fire alarm application.
7. Annunciators shall display information for all buildings connected to the system. Local building annunciators, for general evacuation system buildings, shall be permitted when shown on the drawings and approved by the COTR.

2.6 ALARM NOTIFICATION APPLIANCES

A. Bells:
1. Shall be electric, single-stroke or vibrating, heavy-duty, under-dome, solenoid type.
2. Unless otherwise shown on the drawings, shall be 6 inches (150 mm) diameter and have a minimum nominal rating of 80 dBA at 10 feet (3,000 mm).
3. Mount on removable adapter plates on outlet boxes.
4. Bells located outdoors shall be weatherproof type with metal housing and protective grille.
5. Each bell circuit shall have a minimum of 20 percent spare capacity.

B. Strobes:
1. Xenon flash tube type minimum 15 candela in toilet rooms and 75 candela in all other areas with a flash rate of 1 HZ. Strobes shall be synchronized where required by the National Fire Alarm Code (NFPA 72).
2. Backplate shall be red with 1/2 inch (13 mm) permanent red letters. Lettering to read "Fire", be oriented on the wall or ceiling properly, and be visible from all viewing directions.
3. Each strobe circuit shall have a minimum of 20 percent spare capacity.

4. Strobes may be combined with the audible notification appliances specified herein.

C. Horns:

1. Shall be electric, utilizing solid state electronic technology operating on a nominal 24 VDC.
2. Shall be a minimum nominal rating of 80 dBA at 10 feet (3,000 mm).
3. Mount on removable adapter plates on conduit boxes.
4. Horns located outdoors shall be of weatherproof type with metal housing and protective grille.
5. Each horn circuit shall have a minimum of 20 percent spare capacity.

2.7 ALARM INITIATING DEVICES

A. Manual Fire Alarm Stations: (Not applicable to project SOW)

1. Shall be non-breakglass, address reporting type.
2. Station front shall be constructed of a durable material such as cast or extruded metal or high impact plastic. Stations shall be semi-flush type.
3. Stations shall be of single action pull down type with suitable operating instructions provided on front in raised or depressed letters, and clearly labeled "FIRE".
4. Operating handles shall be constructed of a durable material. On operation, the lever shall lock in alarm position and remain so until reset. A key shall be required to gain front access for resetting, or conducting tests and drills.
5. Unless otherwise specified, all exposed parts shall be red in color and have a smooth, hard, durable finish.

B. Smoke Detectors:

1. Smoke detectors shall be photoelectric type and UL listed for use with the fire alarm control unit being furnished.
2. Smoke detectors shall be addressable type complying with applicable UL Standards for system type detectors. Smoke detectors shall be installed in accordance with the manufacturer's recommendations and NFPA 72.
3. Detectors shall have an indication lamp to denote an alarm condition. Provide remote indicator lamps and identification plates where detectors are concealed from view. Locate the remote indicator lamps and identification plates flush mounted on walls so they can be observed from a normal standing position.

4. All spot type and duct type detectors installed shall be of the photoelectric type.
5. Photoelectric detectors shall be factory calibrated and readily field adjustable. The sensitivity of any photoelectric detector shall be factory set at 3.0 plus or minus 0.25 percent obscuration per foot.
6. Detectors shall provide a visual trouble indication if they drift out of sensitivity range or fail internal diagnostics. Detectors shall also provide visual indication of sensitivity level upon testing. Detectors, along with the fire alarm control units shall be UL listed for testing the sensitivity of the detectors.

C. Heat Detectors: (Not applicable to project SOW)
1. Heat detectors shall be of the addressable restorable rate compensated fixed-temperature spot type.
2. Detectors shall have a minimum smooth ceiling rating of 2,500 square feet (230 square meters).
3. NOT APPLICABLE - Ordinary temperature (135 degrees F (57 degrees C)) heat detectors shall be utilized in elevator mechanical rooms. Intermediate temperature rated (200 degrees F (93 degrees C)) heat detectors shall be utilized in all other areas.
4. Provide a remote indicator lamp, key test station and identification nameplate.

D. Water Flow and Pressure Switches:
1. Wet pipe water flow switches and dry pipe alarm pressure switches for sprinkler systems shall be connected to the fire alarm system by way of an address reporting interface device.
2. All new water flow switches shall be of a single manufacturer and series and non-accumulative retard type. Section 21 13 13, WET-PIPE SPRINKLER SYSTEMS for new switches added. Connect all switches shown on the approved shop drawings.
3. All new switches shall have an alarm transmission delay time that is conveniently adjustable from 0 to 60 seconds. Initial settings shall be 30-45 seconds. Timing shall be recorded and documented during testing.

E. Extinguishing System Connections:
1. Kitchen Range Hood and Duct Suppression Systems:

a. Each suppression system shall be equipped with a micro-switch connected to the building fire alarm control unit. Discharge of a suppression system shall automatically send a alarm signal to the building fire detection and alarm system for annunciation.

b. Operation of this suppression system shall also automatically shut off all sources of fuel and heat to all equipment requiring protection under the same hood.

2. Each gaseous suppression system shall be monitored for system alarm and system trouble conditions via addressable interface devices.

2.8 SUPERVISORY DEVICES

A. Duct Smoke Detectors: (Not applicable to project SOW)

1. Duct smoke detectors shall be provided and connected by way of an address reporting interface device. Detectors shall be provided with an approved duct housing mounted exterior to the duct, and shall have perforated sampling tubes extending across the full width of the duct (wall to wall). Detector placement shall be such that there is uniform airflow in the cross section of the duct.
2. Interlocking with fans shall be provided in accordance with NFPA 90A and as specified hereinafter under Part 3.2, "TYPICAL OPERATION".
3. Provide remote indicator lamps, key test stations and identification nameplates (e.g. "DUCT SMOKE DETECTOR AHU-X") for all duct detectors. Locate key test stations in plain view on walls or ceilings so that they can be observed and operated from a normal standing position.

B. Sprinkler and Standpipe System Supervisory Switches: (Not applicable to project SOW)

1. Each sprinkler system water supply control valve, riser valve or zone control valve, and each standpipe system riser control valve shall be equipped with a supervisory switch. Standpipe hose valves, and test and drain valves shall not be equipped with supervisory switches.
2. PIV (post indicator valve) or main gate valve shall be equipped with a supervisory switch.
3. Valve supervisory switches shall be connected to the fire alarm system by way of address reporting interface device. See Section 21 13 13, WET-PIPE SPRINKLER SYSTEMS for new switches to be added.

Connect tamper switches for all control valves shown on the approved shop drawings.

4. The mechanism shall be contained in a weatherproof die-cast aluminum housing that shall provide a 3/4 inch (19 mm) tapped conduit entrance and incorporate the necessary facilities for attachment to the valves.
5. The entire installed assembly shall be tamper-proof and arranged to cause a switch operation if the housing cover is removed or if the unit is removed from its mounting.
6. Where dry-pipe sprinkler systems are installed, high and low air pressure switches shall be provided and monitored by way of an address reporting interface devices.

2.9 ADDRESS REPORTING INTERFACE DEVICE

A. Shall have unique addresses that reports directly to the addressable fire alarm panel.

B. Shall be configurable to monitor normally open or normally closed devices for both alarm and trouble conditions.

C. Shall have terminal designations clearly differentiating between the circuit to which they are reporting from and the device that they are monitoring.

D. Shall be UL listed for fire alarm use and compatibility with the panel to which they are connected.

E. Shall be mounted in weatherproof housings if mounted exterior to a building.

2.10 SMOKE BARRIER DOOR CONTROL

A. Electromagnetic Door Holders: (Not applicable to project SOW)

2.11 UTILITY LOCKS AND KEYS:

A. All key operated test switches, control units, annunciator panels and lockable cabinets shall be provided with a single standardized utility lock and key.

B. Key-operated manual fire alarm stations shall have a single standardized lock and key separate from the control equipment.

C. All keys shall be delivered to the COTR.

2.12 SPARE AND REPLACEMENT PARTS

A. Provide spare and replacement parts as follows:

1. Manual pull stations - n/a

3. Heat detectors - n/a

4. Fire alarm strobes – 2
5. Fire alarm bells – n/a
6. Smoke detectors – 1
7. Duct smoke detectors with all appurtenances – n/a
8. Sprinkler system water flow switch – n/a
9. Sprinkler system water pressure switch – n/a
10. Sprinkler valve tamper switch – n/a
11. Control equipment utility locksets – n/a
12. Control equipment keys – n/a
14. 2.5 oz containers aerosol smoke – 1
15. Monitor modules – 1
16. Control modules – 1
17. Fire alarm SLC cable (same as installed) – 100 feet (152 m)

C. Spare and replacement parts shall be in original packaging and submitted to the COTR.

D. Furnish and install a storage cabinet of sufficient size and suitable for storing spare equipment. Doors shall include a pad locking device. Padlock to be provided by the VA. Location of cabinet to be determined by the COTR.

E. Provide to the VA, all hardware, software, programming tools, license and documentation necessary to permanently modify the fire alarm system on site. The minimum level of modification includes addition and deletion of devices, circuits, zones and changes to system description, system operation, and digitized evacuation and instructional messages.

2.13 INSTRUCTION CHART:

Provide a digitally generated instruction card mounted behind a Lexan plastic or glass cover in a stainless steel or aluminum frame with a backplate. Install the frame in a conspicuous location observable from each control unit where operations are performed. The card shall show those steps to be taken by an operator when a signal is received under all conditions, normal, alarm, supervisory, and trouble. Provide an additional copy with the binder for the input output matrix for the sequence of operation. The instructions shall be approved by the COTR before being posted.

PART 3 - EXECUTION

3.1 INSTALLATION:

A. Installation shall be in accordance with NFPA 70, 72,75, 90A, and 101 as shown on the drawings, and as recommended by the major equipment manufacturer. Fire alarm wiring shall be installed in conduit. All conduit and wire shall be installed in accordance with, Section 28 05 13 CONDUCTORS AND CABLES FOR ELECTRONIC SAFETY AND SECURITY, Section 28 05 26 GROUNDING AND BONDING FOR ELECTRONIC SAFETY AND SECURITY, Section 28 05 28.33 CONDUIT AND BACKBOXES FOR ELECTRONIC SAFETY AND SECURITY, and all penetrations of smoke and fire barriers shall be protected as required by Section 07 84 00, FIRESTOPPING.

B. All conduits, junction boxes, conduit supports and hangers shall be concealed in finished areas and may be exposed in unfinished areas.

C. All new and reused exposed conduits shall be painted in accordance with Section 09 91 00, PAINTING to match surrounding finished areas and red in unfinished areas.

E. Existing devices that are reused shall be properly mounted and installed. Where devices are installed on existing shallow backboxes, extension rings of the same material, color and texture of the new fire alarm devices shall be used. Mounting surfaces shall be cut and patched in accordance with Section 01 00 00, GENERAL REQUIREMENTS, Restoration, and be re-painted in accordance with Section 09 91 00, PAINTING as necessary to match existing.

F. All fire detection and alarm system devices, control units and remote annunciators shall be flush mounted when located in finished areas and may be surface mounted when located in unfinished areas. Exact locations are to be approved by the COTR.

G. Speakers shall be ceiling mounted and fully recessed in areas with suspended ceilings. Speakers shall be wall mounted and recessed in finished areas without suspended ceilings. Speakers may be surface mounted in unfinished areas.

H. Strobes shall be flush wall mounted with the bottom of the unit located 80 inches (2,000 mm) above the floor or 6 inches (150 mm) below ceiling, whichever is lower. Locate and mount to maintain a minimum 36 inches (900 mm) clearance from side obstructions.

I. Manual pull stations shall be installed not less than 42 inches (1,050 mm) or more than 48 inches (1,200 mm) from finished floor to bottom of device and within 60 inches (1,500 mm) of a stairway or an exit door.

J. Where possible, locate water flow and pressure switches a minimum of 12 inches (300 mm) from a fitting that changes the direction of the flow and a minimum of 36 inches (900 mm) from a valve.

3.2 TYPICAL OPERATION

A. Activation of any manual pull station, water flow or pressure switch, gaseous suppression system, or smoke detector shall cause the following operations to occur:

1. Operate the emergency voice communication system in Buildings as indicated on plans. For sprinkler protected buildings, flash strobes continuously only in the zone of alarm. For buildings without sprinkler protection throughout, flash strobes continuously only on the floor of alarm.
2. Continuously sound a temporal pattern general alarm and flash all strobes in the building in alarm until reset at the local fire alarm control unit in Buildings as indicated on plans.
3. Transmit a separate alarm signal, via the main fire alarm control unit to the fire department.
4. Unlock the electrically locked exit doors within the zone of alarm.

B. Operation of duct smoke detectors shall cause a system supervisory condition and shut down the ventilation system and close the associated smoke dampers as appropriate.

C. Alarm verification shall not be used for smoke detectors installed for the purpose of early warning.

3.3 TESTS

A. Provide the service of a NICET level III, competent, factory-trained engineer or technician authorized by the manufacturer of the fire alarm equipment to technically supervise and participate during all of the adjustments and tests for the system. Make all adjustments and tests in the presence of the COTR.

B. When the systems have been completed and prior to the scheduling of the final inspection, furnish testing equipment and perform the following tests in the presence of the COTR. When any defects are detected, make repairs or install replacement components, and repeat the tests until such time that the complete fire alarm systems meets all contract

requirements. After the system has passed the initial test and been approved by the COTR, the contractor may request a final inspection.

1. Before energizing the cables and wires, check for correct connections and test for short circuits, ground faults, continuity, and insulation.
2. Test the insulation on all installed cable and wiring by standard methods as recommended by the equipment manufacturer.
3. Run water through all flow switches. Check time delay on water flow switches. Submit a report listing all water flow switch operations and their retard time in seconds.
4. Open each alarm initiating and notification circuit to see if trouble signal actuates.
5. Ground each alarm initiation and notification circuit and verify response of trouble signals.

3.4 FINAL INSPECTION AND ACCEPTANCE

A. Prior to final acceptance a minimum 30 day "burn-in" period shall be provided. The purpose shall be to allow equipment to stabilize and potential installation and software problems and equipment malfunctions to be identified and corrected. During this diagnostic period, all system operations and malfunctions shall be recorded. Final acceptance will be made upon successful completion of the "burn-in" period and where the last 14 days is without a system or equipment malfunction.

B. At the final inspection a factory trained representative of the manufacturer of the major equipment shall repeat the tests in Article 3.3 TESTS and those required by NFPA 72. In addition the representative shall demonstrate that the systems function properly in every respect. The demonstration shall be made in the presence of a VA representative.

3.5 INSTRUCTION

A. The manufacturer's authorized representative shall provide instruction and training to the VA as follows:

1. One 1-hour sessions to engineering staff, security police and central attendant personnel for simple operation of the system.
2. One 2-hour sessions to engineering staff for detailed operation of the system.
3. One 8-hour sessions to electrical technicians for maintaining, programming, modifying, and repairing the system at the completion

of installation and one 8-hour refresher session 3 months after the completion of installation.

B. The Contractor and/or the Systems Manufacturer's representative shall provide a digitally generated "Sequence of Operation" including a trouble shooting guide of the entire system for submittal to the VA. The sequence of operation will be shown for each input in the system in a matrix format and provided in a loose leaf binder. When reading the sequence of operation, the reader will be able to quickly and easily determine what output will occur upon activation of any input in the system. The INPUT/OUTPUT matrix format shall be as shown in Appendix A to NFPA 72.

C. Furnish the services of a competent instructor for instructing personnel in the programming requirements necessary for system expansion. Such programming shall include addition or deletion of devices, zones, indicating circuits and printer/display text.

PART 4 - SCHEDULES

4.1 DIGITIZED VOICE MESSAGES:

A. Match Existing

- - END - -