Notice of Task Order Request for Proposal
VISN1 Construction MATOC
Solicitation # Sample Project 3 – Boston HCS

ISSUE DATE: N/A PROPOSAL DUE DATE: NA at N/A

OFFICE ISSUING THIS REQUEST - LOCATION: VAMC Manchester

Department of Veterans Affairs
Network Contracting Office (NCO) 1
718 Smyth Road, BST Suite 105
Manchester, NH 03104

PROJECT NUMBER: Sample Project 3
PROJECT TITLE: Lead Paint Removal, Building 61 & 62,
PROJECT SUMMARY: The work for this project shall provide all necessary supervision, labor, equipment, material, transportation testing, and infrastructure required to complete work for project titled "Sample Project 3," Brockton VAMC, 940 Belmont Street, Brockton, MA 02301-5596 in accordance with the Contract Documents, Statement of Work, Technical Specifications, and Drawings, abatement of asbestos containing materials, and other hazardous materials. The period of performance for this project is 60 days from Notice to Proceed.

Point of Contact: Richard Coutermarsh
Email: richard.coutermarsh@va.gov
Phone: 603-626-6525

I. GENERAL INFORMATION

1. All references to "Bid" or "Bidder" shall be understood to mean "Offer" or "Offeror".

2. MAGNITUDE OF CONSTRUCTION: Between $100,000 and $250,000.

3. MATOC CATEGORY: N/A

4. SITE VISIT: Monday, April 30, 2018, 12:00 PM. Attendees will meet in Room C115, Building 61, Brockton VAMC. POCs for the Site Visit are Avin Kannadan, Julie Heher (Bldg. 61) and Richard Lapierre, Bldg. 62)

5. OFFER ACCEPTANCE PERIOD: Offers providing less than one-hundred and twenty (120) calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.

6. REQUESTS FOR INFORMATION: Requests for Information (RFIs) shall be submitted by the prime contractor, through the Vendor Portal to the Point of Contact listed above. No telephone RFIs will be accepted.

7. CONTRACT CLAUSES: All provisions and clauses from the respective NCO 1 Lead Paint Abatement IDIQ contract are applicable to this requirement. If there are any conflicts between the contract clauses and the information outlined in the resultant task order, the Lead Paint Abatement IDIQ contract language takes precedence over the information in the task order.

8. SPECIFICATIONS AND DRAWINGS: All applicable specifications and drawings will be provided electronically along with the Request for Task Order Proposal. No hard copies will be made available to proposing contractors.

9. VETBIZ VIP Verification: Not applicable at this time. (Subsequent task orders are 100% set asides for verified Service Disabled Veteran Owned Small Business (SDVOSB) and Veteran Owned Small Business (VOSB). The award of this requirement shall not be delayed due to loss of SDVOSB or VOSB verification.)

The Government will review VetBiz (https://www.vip.vetbiz.gov/) to confirm SDVOSB/VOSB status verification for the submitted proposal. Subsequent confirmation of SDVOSB/VOSB verification status will be performed for the apparent awardee. Loss of verification between time of offer and completion of the selection process disqualifies the offeror for award.

10. LIMITATIONS ON SUBCONTRACTING (Reference Contract Clause FAR 52.219-14 for further information): By submission of an offer and execution of a contract, the Offeror agrees that in performance of the contract, the offeror will perform at least fifteen (15) percent of the cost of the contract, not including the cost of materials, with its own employees.

11. FUNDS: Are Not presently available for this acquisition. No contract award will be made until appropriated funds are made available.

12. BONDS (Reference Contract Clause FAR 52.228-15 for further information on applicability): Payment and Performance bonds required in the penal sum of 100% of the price of the task order.

13. LIQUIDATED DAMAGES: No - Liquidated Damages may apply to subsequent task orders.

14. WAGE DETERMINATION: Wages for all contractors and subcontractors must comply with Davis Bacon Wage Determinations. The current determination is General Decision **MA180001 dated 01/05/2018**. Be advised the determination that is current at the time of the Task Order award is the determination that will apply for the project. Current determinations are always available at: http://www.wdol.gov/.

15. TASK ORDER PERFORMANCE PERIOD: 60 calendar days after receipt of written Notice to Proceed performed in concurrent or sequential phases as indicated or required.

II. PROPOSAL PREPARATION AND EVALUATION INFORMATION

1. PROPOSAL PREPARATION INSTRUCTION: To assure timely and equitable evaluation of proposals, offerors must follow the instructions contained herein. In order for proposals to receive full consideration for award, offerors should ensure that the information furnished in support of the proposal is factual, accurate, and complete, and directly responds to the requirements of this Task Order Request for Proposal. Offerors must clearly identify any exception to the solicitation terms and conditions and provide complete accompanying rationale as outlined in the MATOC base contract section 4.6.3 Deviations and Alternate Proposals - *"Offerors shall specifically identify all deviations from the minimum RFQ/RFP requirements in a cover letter in a section entitled "Alternate Proposal" or "Deviations." This requirement applies for all proposal revisions and Final Proposal Revisions. Proposed alternates/deviations shall specifically address in detail the alternate and rationale for proposing. Alternate solutions and deviations shall include separate pricing information. If an alternate/deviation is proposed, the work as specified in the solicitation must also be priced."*

Each offer in response to this request shall consist of the following:

- Signed offer to include Statement of Proposal Items
    - Offerors must submit an itemized breakdown of costs (Attachment A) in sufficient detail to permit a complete analysis of labor burden, materials, equipment, transportation, supervision, disposal costs, overhead and profit and shall cover all work involved in the Task Order
    - Copies of all subcontractor quotes are required
- Signed Acknowledgement of Amendments
- Technical proposal - if required see number 4 below

Proposals unreasonably high when compared to the Government estimate, and market conditions evidenced by other competitive proposals received, may be indicative of an inherent lack of understanding of the solicitation requirements and may result in proposal rejection without discussion.

2. PROPOSAL SUBMISSION: All proposals shall be submitted by the prime contractor, through the Vendor Portal to the Point of Contact listed above. NO HARD COPY PROPOSALS OR FACSIMILES WILL BE ACCEPTED.

To be considered and accepted as timely the proposal must be uploaded in its entirety prior to the deadline. Failure to provide a proposal in its entirety prior to the deadline will render the proposal noncompliant.

3. BASIS FOR AWARD: LPTA

The Government intends to award a Task Order to one offeror without discussions.

- Placement procedures for all task orders include consideration of the following:
- Contractor Responsibility
- Past performance on earlier orders under the contract including;
    - Quality
    - Timeliness
    - Cost Control

- Potential impact to ongoing performance of other orders placed with the contractor
- Minimum order requirements.

4. TECHNICAL PROPOSAL: A technical proposal is required in addition to the items outlined above.

"TECHNICAL ACCEPTABILITY FACTOR: There is one Technical factor which will be reviewed as "Acceptable or Non-Acceptable". The Government intends to make a single award to the lowest priced technically acceptable Offer. To receive an overall acceptability and be eligible for award, the Offeror must be technically acceptable in the factor identified below.

1. SCHEDULE: Ability to adhere to the construction schedule for completion within 365 days from Notice to Proceed as specified in the solicitation.

Using the information submitted in response to the solicitation, the Government will review the Offeror's scheduling methodology to determine if they have scheduling processes that ensure completion and control of the project from beginning to end. **To be technically acceptable, the Offeror must provide a job specific schedule for this project that demonstrates an understanding of the limitations of the schedule as well as an understanding that an appropriate schedule will result in successful completion of the project for this sub-factor.** Schedule shall be submitted in pdf format (no scanned or photographed schedules) formatted to print on 11x17 sheet(s) with a minimum font size of nine. Proposals shall describe capability to meet CPM form requirements and demonstrate, with a sample schedule, the ability to appropriately utilize this method of scheduling. Based on the information provided in response to the Solicitation, the Government will evaluate the probability of the Offeror's ability to meet the contract completion time."

5. EVALUATION OVERVIEW: Price will be evaluated on the basis of its price reasonableness to the Government. Evaluation will begin with the lowest price proposal. If the technical proposal for the lowest price offeror is rated Acceptable, not further technical evaluation will be conducted. If the technical proposal for the lowest price offeror is rated Unacceptable, evaluators will evaluate the next to the lowest price offeror's proposal for technical acceptability.

Price will be evaluated on the basis of its price reasonableness to the Government.

6. ATTACHMENTS:

Statement of Proposal Items
Acknowledgment of Amendments
Self-Performed Calculation Form
Itemized Schedule of Values Cost Breakdown
A. SOW 523-16-901 Emergency Flood 1B and 1C
B. SPECS 52316901 Project Manual-1-2
C. DRWGS 523-16-901 - 1C1B AUG 14
D. WAGE RATES General Decision Number MA170001 08182017

STATEMENT OF PROPOSAL ITEMS

The offeror agrees to perform the work required at the prices specified below in strict accordance with the terms of the solicitation, if this offer is accepted by the Government in writing within one-hundred and twenty (120) calendar days after the date offers are due.

PROPOSAL ITEM I (Base Proposal): Contractor shall provide all labor, materials, tools, equipment, and supervision, and perform all operations necessary for Exterior Wood Lead Paint Removal, Building 11 & 25. Work includes, but is not limited to, general construction, walls, and finishes, electrical, mechanical and plumbing systems. All structural, exterior, masonry, and concrete demolition, specified abatement, Installation of new plumbing, mechanical, electrical, fire protection, fire alarm, and communications systems, installation of new walls, ceilings and finishes, including casework and carpentry, site work and certain other items. All work to be completed in strict accordance with the attached drawings and specifications. All work, including final cleanup and completion of any punch list items, shall be performed within 365 calendar days after the date of receipt of notice to proceed.

PROPOSAL ITEM I $_____

Submitted for:

Company Name _____

Submitted by:

Authorized Signature _____ Date: _____

Printed Name: _____

ACKNOWLEDGMENT OF AMENDMENTS

The person submitting the proposal on behalf of the offeror shall sign the area below titled "Acknowledged by" and shall initial/date in the space(s) below to acknowledge any Amendment(s). This individual must be a legally authorized signatory of the company.

NOTE: Failure to acknowledge Amendments may render your offer unacceptable.

CERTIFICATION

I/we have received and considered the following Amendment(s) in the submitted proposal for this project.

Amendment Number	None	A00001	A00002	A00003	A00004	A00005
Date						
Initials						

Acknowledged by: _____

Printed Name: _____

CALCULATION OF SELF-PERFORMED WORK

SUBMITTED IN RESPONSE TO Sample Project 1 Exterior Wood Lead Paint Removal, Building 11 & 25.

Use a format similar to the following to identify and calculate cost of the work to be self-performed. Refer to the definitions pertaining to “Self-performance of work”, “On the Site” and “Total amount of work to be performed under the contract”.

(Includes mobilization and utilization of owned or rented plant and equipment to be operated by the prime contractor’s own employees; only those materials which will be both purchased and installed by the prime’s own forces; labor associated with those aforementioned materials or equipment; only those supplies to directly support work performed by the contractor’s own employees; and the contractor’s own job overhead costs.)

Clearly describe the work to be self-performed:

_____
_____
_____
_____
_____
_____

Show Calculation of Self-Performed work: _____

B.1) Total Offer Price: $_____

B.2) If applying for consideration as a General Contractor (multi-discipline projects) work must be self-performed
$_____

B.3) Subtract G&A, home office overhead, prime contractor’s markups for profit, bond, state use tax, etc.
$_____

B.4) Remainder is “Total amount of work to be performed under the Contract” = $_____

B.5) “Work to be self-performed”: = $_____ Amount shown on this line should match the amount shown for “Show Calculation of Self-Performed work”?

B.6) 15 % Self-performed Work = Line B.5 / B.4 X 100% = _____%

ITEMIZED COST BREAKDOWN FOR BASE ITEM LETTER A

Base Item Letter A - Cost Breakdown

Project No.: Sample Project 1 **Date:**

Project Title: Lead Paint Removal, Building 61 & 62,

Project Location: VISN 1

Offerer Company Name and Address:

Item Description	**Labor Cost**	**Material Cost**	**Total Cost**
Division 1 - General Requirements			
Division 2 - Existing Conditions			
Division 3 - Concrete			
Division 4 - Masonry			
Division 5 - Metals			
Division 6 - Wood and Plastic			
Division 7 - Thermal and Moisture Protection			
Division 8 - Doors and Windows			
Division 9 - Finishes			
Division 10 - Specialties			
Division 11 - Equipment			
Division 12 - Furnishings			
Division 13 - Special Construction			
Division 14 - Conveying Equipment			
Division 21 - Fire Suppression			
Division 22 - Plumbing			

Division 23 - Heat, Ventilating, and Air Conditioning			
Division 26 - Electrical			
Division 27 - Communications			
Division 28 - Electronic Safety and Security			
Division 31 - Earthwork			
Division 32 - Exterior Improvements			
Division 33 - Utilities			
Division 34 - Transportation			
Subtotal			
Overhead (xx %)			
Profit (xx %)			
Bond (xx %)			
Total Base Offer Cost			

Department of Veterans Affairs
VA Boston Healthcare System (Brockton Division)

STATEMENT OF WORK

LEAD-BASED PAINT (LBP) ABATEMENT, STABILIZATION WORK, AND REMOVAL SERVICES

A. GENERAL

1. **Introduction:** VA Boston Healthcare System is requesting services to abate, stabilize, and remove all Lead-based Paint and materials at the Brockton Campus, Building 61.

2. **Title of Project:** Routine Interior lead-based paint (LBP) abatement VABHS Brockton Division, Building 61.

3. **Safety Requirements:** It shall be the Contractor's responsibility to perform all tasks in compliance with the applicable federal, state and local laws and regulations for collecting, handling and transporting of materials for testing.

4. **Scope of Work:** Provide routine LBP abatement, stabilization, removal, and other lead work services at the following: VA Boston Health Care System, Building 61 located at 940 Belmont St, Brockton MA 02301.
    a. Bldg. 61 – Removal of Lead paint coated window sills. 58 Window Sills.
    b. Bldg. 61 – Removal of Lead paint coated window frames. 58 Window frames.
    c. Work to be performed at VAMC Brockton in accordance with the Statement of Work, Specifications, Drawings, Federal, State, and Local Codes.
    d. After Contract Award the Contractor is required to provide a Payment Bond, a Performance Bond, Insurance certificate, a Schedule of Values and a Realistic Construction Schedule within 10 days. Once received and confirmed, the period of performance for the above mentioned project will begin with a Notice to Proceed (NTP) issued at a Pre-Construction Meeting (Pre-Con) and shall not exceed 45 days after NTP. This period of performance includes 10 days for all submittals to be approved prior to beginning construction. As part of this solicitation the General Contractor (GC) shall submit an electronic PDF preliminary schedule showing the methodology for accomplishing the project within the period of performance.

5. **Definitions:** "Lead-Based Paint (LBP) *Abatement*" means permanently removing lead-based paint hazards from target housing (e.g., residential quarters) and child-occupied facilities (e.g., day care centers), by the on-site or off-site removal of LBP, removal of building components coated with LBP, and/or the cleanup of LBP-contaminated dust, debris.

   "Lead-Based Paint (LBP) *Removal*" means permanently removing lead-based paint hazards from facility structures that are not target housing or child-occupied facilities, by the on-site or off-site removal of LBP, removal of building components coated with LBP, the cleanup of lead-contaminated dust and debris, and/or the removal of lead-contaminated soils.

   LBP abatement and LBP stabilization must follow Federal EPA requirements and U.S. Department of Housing and Urban Development (HUD) guidelines in addition to applicable Federal and State OSHA, State EPA and State Department of Public Health (DPH) regulations. All LBP abatement shall be performed by State-licensed LBP abatement contractors using EPA-

accredited, state-certified and/or State-licensed (as required by Federal and/or State regulatory requirements) LBP abatement workers and supervisors. LBP removal and other lead work must follow Federal (and, where applicable, State) OSHA Lead in Construction standard(s) (e.g., 29 CFR 1926.62) and Federal (and, where applicable, State) EPA and local environmental protection and public health lead regulations.

The Contractor shall provide all labor and materials including tools and apparatus, equipment, supervision, certifications, State licenses, regulatory permits and notifications, transportation and waste disposal necessary to perform LBP abatement.

All lead workers and supervisors shall have also completed 16-hour Class III Asbestos Worker Training when removing asbestos-containing window caulking in window frames coated with LBP.

All other lead work shall be performed by workers and supervisors who have received required training in the OSHA Lead in Construction Standard (29 CFR 1926.62) and any applicable state OSHA and Federal/State EPA requirements.

All lead waste, recycling and hauling firms and all hazardous waste transfer stations, hazardous waste treatment, storage and disposal facilities (TSDFs) and lead recycling facilities performing under this contract shall at all times throughout the Period of Performance (PoP) possess all applicable Federal, State and local regulatory approvals, permits and/or licenses, and each lead waste transporter, treatment or disposal facility and lead recycling facility shall be approved in advance in writing by the Contracting Officer Representative (COR).

6. **Deliverables:** Contractor shall provide the final sampling results of the samples in electronic and hard copy. Submitting written safety plans for compliance with LBP environmental and occupational safety and health standards, procedures outlined in VA Directive 2008-055, and any other Federal, state, or local regulations.

7. **Type of Contract:** Seed Project Request for LBP Abatement IDIQ.

First Floor			**Second Floor**	
Room#	**Qty#**		**Room#**	**Qty#**
A110	3		D201	3
A107	2		D203	3
BATHROOM	1		D206	1
A103	3		D207	2
A102	2		D210	3
B103	4		STAIRWELL	1
B106 (BATHROOM)	1		HALLWAY	1
B110	3		E201	5
C102	1		E206	1
C103	4		E210	3
C105	1		E207	2
C111	3		E205	1
C115	1			

C108	2			
C107 (RESTROOM)	1			
Note: First floor, Room B107 had 2 window sills already abated.				

8. General Requirements:

a. General Contractor's employees and sub-contractor employees shall not enter the VA Medical Center site or project site without appropriate VA issued PIV badge. See specification 01 00 00 subpar 1.5 Construction Security Requirements for more full requirements.

b. General Contractor shall furnish & post a board where directed by the Contracting Officer, VA Project Engineer (COTR) and VA Safety Specialist that includes, but is not limited to, a copy of Rates and Wages, the Davis-Bacon poster & schedules, ILSM/ICRA/GEMS/Patient Safety signed determinations, Site Specific Emergency Contact information, Construction site fire response procedures & evacuation plan, post the number of accident free days, emergency force contact information with nearest hospital including directions, etc.

c. All utility tie-ins and interruption of utility systems require prior approval and scheduling with VA Project Engineer (COTR), Engineering Manager and M&O Foreman. The GC shall submit a request to interrupt any utility systems to the VA Project Engineer (COTR) in writing at a minimum of three (3) weeks in advance of proposed interruption. See specification 01 00 00 subpar 1.6 Operations and Storage Areas for full requirements.

d. The GC shall not proceed with mobilization or construction until after Veteran Affairs' acceptance of all required submittals and coordination drawings.

e. The GC shall follow the VHA BHS Brockton Project's submittal process attached to specification section 01 00 00. The GC shall supply a master submittal list to track all required submittal items and provide the VA Project Engineer (COTR) an updated master submittal list weekly until the submittal process is completed. All submittals shall include appropriate project information, GC signature, adequate descriptive literature, catalog cuts, shop drawings and other data necessary for the Government to ascertain that the proposed equipment and materials comply with the contract document requirements. Catalog cuts submitted for approval shall be legible and clearly identify equipment being submitted (i.e. highlight, cloud, etc.).It is the GC's responsibility to provide submittals that meet all necessary Federal, State and Local code requirements in order to be approved. Failure to meet these requirements are the responsibility of the contractor and do not justify a request of time extension.

f. The GC shall submit a Site Superintendent Designation Letter designating the Site Superintendent to be dedicated to this project only. The Site Superintendent shall be physically present at the construction site (Building 61 & 62) at all times there are sub-contractors present, work activities are ongoing, materials are being delivered, etc. The GC shall submit, via e-mail, a list identifying key GC personnel, their responsibilities, contact info and 24 hour/7 day per week primary and secondary contacts. Superintendent Communications: At all times during the performance of this contract, the GC's designated Site Superintendent is to be available by cell phone. After-hours phone number shall be posted at the construction site on the required board in item #2 above.

g. Before placement and installation of work subject to acceptance checks and tests, the GC shall coordinate and notify the VA Project Engineer (COTR) in sufficient time to enable testing personnel to be present at the site in time for proper testing and field inspection. This includes notification prior to closing walls, ceilings, chases, etc. Such prior notice

shall be not less than two (2) weeks unless otherwise designated by the VA Project Engineer (COTR).

h. General contractor shall coordinate in advance with VA Project Engineer (COR) regarding ALL work above ceilings in public corridors, offices, any general public occupied spaces, etc. All work within interior spaces, particularly patient care buildings, including public corridors in patient care buildings, the general contractor shall utilize HEPACART (or equal) environment ceiling access containment carts with embedded negative air-machine, impeller fan, HEPA filters, and windows. No above the ceiling work shall be performed without the proper HEPACART (or equal) environment ceiling access containment carts in any interior spaces. This is a requirement for ALL work outside the negative air pressured construction partitioned area.

i. General contractor shall coordinate in advance with VA Project Engineer (COR) regarding pulling of all cabling/wiring/fiber above ceilings within all interior spaces, particularly patient care buildings, including public corridors in patient care buildings, the general contractor shall utilize HEPACART Cabling Access Point (CAP) (or equal) product in the ceiling to feed cable cleanly through a slot in the ceiling with minimal impact. This shall be installed within the HEPACART (or equal) environment ceiling access containment carts, and cabling/wiring/fiber pulling only can then be performed via the HEPACART Cabling Access Point (CAP) (or equal) product. Removal of the cabling access point shall be performed within the environment ceiling access containment cart.

9. Safety Precautions:

a. The Contractor shall comply with all applicable Federal, State and local legal requirements regarding workers health and safety. The requirements include but are not limited to, those found in Federal and State Occupational Safety and Health Act (OSHA) statutes and regulations, such as applicable provisions of Title 29, Code of Federal Regulations (CFR) Parts 1910 and 1926. Contractor is solely responsible for determining the legal requirements that apply to activities, and shall ensure safe and healthful working conditions for its employees.

b. Contractor shall assume the responsibility to guard against causing of fires and/or explosions and to protect Government Property.

c. The Contractor shall perform the work in a manner consistent with the area security and fire safety regulations especially with regard to exits and exit way access. Utility shutdowns shall not compromise security, communication or fire safety for occupants.

d. No flammable liquids shall be stored or used in the medical center.

e. The necessary number and appropriate types of portable fire extinguishers are required per National Fire Protection Agency (NFPA) 10 and NFPA 241. Contractor shall keep certification on site at all times of extinguisher inspections.

f. The Contractor shall receive from the COR a permit for all cutting, welding, and soldering 24 hours in advance. All permits shall be prominently displayed during all construction.

g. All necessary precautions shall be taken by the contractor to prevent accidental operation of any existing smoke detectors or sprinkler heads.

h. The Contractor shall comply with an Infection Control Risk Assessment (ICRA) which will be developed with the COR and the Infection Control Practitioner assigned to the project at the Preconstruction Conference. Multiple ICRA's may be necessary to address specific risks at various stages of the project and must be approved prior to proceeding on each phase. The Contractor shall also comply with an Interim Life Safety Measures (ILSM) & Green Environmental Management System (GEMS) which will be developed with the COR.

10. Hazardous Material Reporting:

a. The Contractor shall maintain hazardous material inventories and material safety data sheets (MSDS) for all hazardous materials (as defined in CFR 1910.120, 40 CFR's 355, 370, & 372) to be stored and used on this Medical Center. Hazardous materials must be inventoried when received and at the project's completion. The amounts used shall be maintained for the project duration, and for the calendar year (ending 31 December).
b. Hazardous Materials Inventories, Material Safety Data Sheets and material quantities used shall be submitted to the Contracting Officer for approval.
c. In the event of a spill, Contractor shall immediately notify the Contracting Officer's Technical Representative (extension 5138) as well as the Contracting Officer. The Contractor shall be solely responsible for the expense of any cleanup of such spill, and the cleanup shall be in accordance with the applicable provisions of 40 CFR Part 761.

11. Environmental Protection:

a. In order to provide for abatement and control of all environmentally hazardous materials arising from demolition and/or construction activities, the Contractor shall comply with all applicable environmentally hazardous material control and abatement and all applicable provisions of the Corps of Engineers' Manual EM 385-1-1, "General Safety Requirements" as well as the specific requirements stated elsewhere in the Contract Documents.
b. Contract is responsible for daily cleanup of all areas affected by construction. Construction areas in use or affected shall be returned to condition in which they were turned over or initially found. VA Housekeeping shall not be dispatched for cleaning associated with contractor construction.
c. Contractor shall take every precaution in preserving flooring, finishes, equipment, and furniture in areas of construction. Contractor shall repair or replace any damage incurred during construction at their expense.
d. Contractor shall use freight elevators for transmission of materials and personnel. Contractor shall take every precaution in preserving the elevators, including the hoist way and lobby doors, interior finishes, and shall conduct all good practices in observing lifting and motor components tolerances. Any damage incurred to any elevator component due to negligence will be repaired at expense of the contractor, within the work day of incurred damage.

Department of Veterans Affairs
VA Boston Healthcare System (Brockton Division)

STATEMENT OF WORK

LEAD-BASED PAINT (LBP) DOOR ABATEMENT, STABILIZATION WORK, AND REMOVAL SERVICES

A. GENERAL

1. **Introduction:** VA Boston Healthcare System is requesting services to abate, stabilize, and remove all Lead-based Paint Doors and Frames at the Brockton Campus, Building 62.

2. **Title of Project:** Routine Interior Door lead-based paint (LBP) abatement VABHS Brockton Division, Building 62.

3. **Safety Requirements:** It shall be the Contractor's responsibility to perform all tasks in compliance with the applicable federal, state and local laws and regulations for collecting, handling and transporting of materials for testing.

4. **Scope of Work:** Provide routine LBP abatement, stabilization, removal, and other lead work services at the following: VA Boston Health Care System, Building 61 located at 940 Belmont St, Brockton MA 02301.
    a. Bldg. 62 – Removal of Lead paint coated Interior Doors. 10 Interior Doors.
    b. Bldg. 62 – Removal of Lead paint coated Door Frames. 11 Door Frames.
    c. Bldg. 62 – Work to include patch, repair and paint as needed. Additional frame will be removed and repaired for a frameless opening.
    d. Work to be performed at VAMC Brockton in accordance with the Statement of Work, Specifications, Drawings, Federal, State, and Local Codes.
    e. After Contract Award the Contractor is required to provide a Payment Bond, a Performance Bond, Insurance certificate, a Schedule of Values and a Realistic Construction Schedule within 10 days. Once received and confirmed, the period of performance for the above mentioned project will begin with a Notice to Proceed (NTP) issued at a Pre-Construction Meeting (Pre-Con) and shall not exceed 45 days after NTP. This period of performance includes 10 days for all submittals to be approved prior to beginning construction. As part of this solicitation the General Contractor (GC) shall submit an electronic PDF preliminary schedule showing the methodology for accomplishing the project within the period of performance.

5. **Definitions:** "Lead-Based Paint (LBP) *Abatement*" means permanently removing lead-based paint hazards from target housing (e.g., residential quarters) and child-occupied facilities (e.g., day care centers), by the on-site or off-site removal of LBP, removal of building components coated with LBP, and/or the cleanup of LBP-contaminated dust, debris.

   "Lead-Based Paint (LBP) *Removal*" means permanently removing lead-based paint hazards from facility structures that are not target housing or child-occupied facilities, by the on-site or off-site removal of LBP, removal of building components coated with LBP, the cleanup of lead-contaminated dust and debris, and/or the removal of lead-contaminated soils.

   LBP abatement and LBP stabilization must follow Federal EPA requirements and U.S. Department of Housing and Urban Development (HUD) guidelines in addition to applicable

Federal and State OSHA, State EPA and State Department of Public Health (DPH) regulations. All LBP abatement shall be performed by State-licensed LBP abatement contractors using EPA-accredited, state-certified and/or State-licensed (as required by Federal and/or State regulatory requirements) LBP abatement workers and supervisors. LBP removal and other lead work must follow Federal (and, where applicable, State) OSHA Lead in Construction standard(s) (e.g., 29 CFR 1926.62) and Federal (and, where applicable, State) EPA and local environmental protection and public health lead regulations.

The Contractor shall provide all labor and materials including tools and apparatus, equipment, supervision, certifications, State licenses, regulatory permits and notifications, transportation and waste disposal necessary to perform LBP abatement.

All lead workers and supervisors shall have also completed 16-hour Class III Asbestos Worker Training when removing asbestos-containing window caulking in window frames coated with LBP.

All other lead work shall be performed by workers and supervisors who have received required training in the OSHA Lead in Construction Standard (29 CFR 1926.62) and any applicable state OSHA and Federal/State EPA requirements.

All lead waste, recycling and hauling firms and all hazardous waste transfer stations, hazardous waste treatment, storage and disposal facilities (TSDFs) and lead recycling facilities performing under this contract shall at all times throughout the Period of Performance (PoP) possess all applicable Federal, State and local regulatory approvals, permits and/or licenses, and each lead waste transporter, treatment or disposal facility and lead recycling facility shall be approved in advance in writing by the Contracting Officer Representative (COR).

6. **Deliverables:** Contractor shall provide the final sampling results if required and asbestos construction debris disposal in electronic and hard copy. Submitting written safety plans for compliance with LBP environmental and occupational safety and health standards, procedures outlined in VA Directive 2008-055, and any other Federal, state, or local regulations.

7. **Type of Contract:** Seed Project Request for LBP Abatement IDIQ.

8. **General Requirements:**
    a. General Contractor's employees and sub-contractor employees shall not enter the VA Medical Center site or project site without appropriate VA issued PIV badge. See specification 01 00 00 subpar 1.5 Construction Security Requirements for more full requirements.
    b. General Contractor shall furnish & post a board where directed by the Contracting Officer, VA Project Engineer (COTR) and VA Safety Specialist that includes, but is not limited to, a copy of Rates and Wages, the Davis-Bacon poster & schedules, ILSM/ICRA/GEMS/Patient Safety signed determinations, Site Specific Emergency Contact information, Construction site fire response procedures & evacuation plan, post the number of accident free days, emergency force contact information with nearest hospital including directions, etc.
    c. All utility tie-ins and interruption of utility systems require prior approval and scheduling with VA Project Engineer (COTR), Engineering Manager and M&O Foreman. The GC shall submit a request to interrupt any utility systems to the VA Project Engineer (COTR) in writing at a minimum of three (3) weeks in advance of proposed interruption. See specification 01 00 00 subpar 1.6 Operations and Storage Areas for full requirements.

d. The GC shall not proceed with mobilization or construction until after Veteran Affairs' acceptance of all required submittals and coordination drawings.
e. The GC shall follow the VHA BHS Brockton Project's submittal process attached to specification section 01 00 00. The GC shall supply a master submittal list to track all required submittal items and provide the VA Project Engineer (COTR) an updated master submittal list weekly until the submittal process is completed. All submittals shall include appropriate project information, GC signature, adequate descriptive literature, catalog cuts, shop drawings and other data necessary for the Government to ascertain that the proposed equipment and materials comply with the contract document requirements. Catalog cuts submitted for approval shall be legible and clearly identify equipment being submitted (i.e. highlight, cloud, etc.).It is the GC's responsibility to provide submittals that meet all necessary Federal, State and Local code requirements in order to be approved. Failure to meet these requirements are the responsibility of the contractor and do not justify a request of time extension.
f. The GC shall submit a Site Superintendent Designation Letter designating the Site Superintendent to be dedicated to this project only. The Site Superintendent shall be physically present at the construction site (Building 61 & 62) at all times there are sub-contractors present, work activities are ongoing, materials are being delivered, etc. The GC shall submit, via e-mail, a list identifying key GC personnel, their responsibilities, contact info and 24 hour/7 day per week primary and secondary contacts. Superintendent Communications: At all times during the performance of this contract, the GC's designated Site Superintendent is to be available by cell phone. After-hours phone number shall be posted at the construction site on the required board in item #2 above.
g. Before placement and installation of work subject to acceptance checks and tests, the GC shall coordinate and notify the VA Project Engineer (COTR) in sufficient time to enable testing personnel to be present at the site in time for proper testing and field inspection. This includes notification prior to closing walls, ceilings, chases, etc. Such prior notice shall be not less than two (2) weeks unless otherwise designated by the VA Project Engineer (COTR).
h. General contractor shall coordinate in advance with VA Project Engineer (COR) regarding ALL work above ceilings in public corridors, offices, any general public occupied spaces, etc. All work within interior spaces, particularly patient care buildings, including public corridors in patient care buildings, the general contractor shall utilize HEPACART (or equal) environment ceiling access containment carts with embedded negative air-machine, impeller fan, HEPA filters, and windows. No above the ceiling work shall be performed without the proper HEPACART (or equal) environment ceiling access containment carts in any interior spaces. This is a requirement for ALL work outside the negative air pressured construction partitioned area.
i. General contractor shall coordinate in advance with VA Project Engineer (COR) regarding pulling of all cabling/wiring/fiber above ceilings within all interior spaces, particularly patient care buildings, including public corridors in patient care buildings, the general contractor shall utilize HEPACART Cabling Access Point (CAP) (or equal) product in the ceiling to feed cable cleanly through a slot in the ceiling with minimal impact. This shall be installed within the HEPACART (or equal) environment ceiling access containment carts, and cabling/wiring/fiber pulling only can then be performed via the HEPACART Cabling Access Point (CAP) (or equal) product. Removal of the cabling access point shall be performed within the environment ceiling access containment cart.
j. The following products are required for this project:
    i. Door Locks – Schlage Door Locks
    ii. Door Lock Cylinders with Removable Cores - BEST 7-Pin Removable Door Lock Cylinders with Removable Cores from Stanley Security Solutions

9. Safety Precautions:

a. The Contractor shall comply with all applicable Federal, State and local legal requirements regarding workers health and safety. The requirements include but are not limited to, those found in Federal and State Occupational Safety and Health Act (OSHA) statutes and regulations, such as applicable provisions of Title 29, Code of Federal Regulations (CFR) Parts 1910 and 1926. Contractor is solely responsible for determining the legal requirements that apply to activities, and shall ensure safe and healthful working conditions for its employees.

b. Contractor shall assume the responsibility to guard against causing of fires and/or explosions and to protect Government Property.

c. The Contractor shall perform the work in a manner consistent with the area security and fire safety regulations especially with regard to exits and exit way access. Utility shutdowns shall not compromise security, communication or fire safety for occupants.

d. No flammable liquids shall be stored or used in the medical center.

e. The necessary number and appropriate types of portable fire extinguishers are required per National Fire Protection Agency (NFPA) 10 and NFPA 241. Contractor shall keep certification on site at all times of extinguisher inspections.

f. The Contractor shall receive from the COR a permit for all cutting, welding, and soldering 24 hours in advance. All permits shall be prominently displayed during all construction.

g. All necessary precautions shall be taken by the contractor to prevent accidental operation of any existing smoke detectors or sprinkler heads.

h. The Contractor shall comply with an Infection Control Risk Assessment (ICRA) which will be developed with the COR and the Infection Control Practitioner assigned to the project at the Preconstruction Conference. Multiple ICRA's may be necessary to address specific risks at various stages of the project and must be approved prior to proceeding on each phase. The Contractor shall also comply with an Interim Life Safety Measures (ILSM) & Green Environmental Management System (GEMS) which will be developed with the COR.

10. Hazardous Material Reporting:

a. The Contractor shall maintain hazardous material inventories and material safety data sheets (MSDS) for all hazardous materials (as defined in CFR 1910.120, 40 CFR's 355, 370, & 372) to be stored and used on this Medical Center. Hazardous materials must be inventoried when received and at the project's completion. The amounts used shall be maintained for the project duration, and for the calendar year (ending 31 December).

b. Hazardous Materials Inventories, Material Safety Data Sheets and material quantities used shall be submitted to the Contracting Officer for approval.

c. In the event of a spill, Contractor shall immediately notify the Contracting Officer's Technical Representative (extension 5138) as well as the Contracting Officer. The Contractor shall be solely responsible for the expense of any cleanup of such spill, and the cleanup shall be in accordance with the applicable provisions of 40 CFR Part 761.

11. Environmental Protection:

a. In order to provide for abatement and control of all environmentally hazardous materials arising from demolition and/or construction activities, the Contractor shall comply with all applicable environmentally hazardous material control and abatement and all applicable provisions of the Corps of Engineers' Manual EM 385-1-1, "General Safety Requirements" as well as the specific requirements stated elsewhere in the Contract Documents.

b. Contract is responsible for daily cleanup of all areas affected by construction. Construction areas in use or affected shall be returned to condition in which they were turned over or initially found. VA Housekeeping shall not be dispatched for cleaning associated with contractor construction.
c. Contractor shall take every precaution in preserving flooring, finishes, equipment, and furniture in areas of construction. Contractor shall repair or replace any damage incurred during construction at their expense.
d. Contractor shall use freight elevators for transmission of materials and personnel. Contractor shall take every precaution in preserving the elevators, including the hoist way and lobby doors, interior finishes, and shall conduct all good practices in observing lifting and motor components tolerances. Any damage incurred to any elevator component due to negligence will be repaired at expense of the contractor, within the work day of incurred damage.

DEPARTMENT OF VETERANS AFFAIRS
VHA MASTER SPECIFICATIONS

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SECTION 01 00 00
GENERAL REQUIREMENTS

1.1 SAFETY REQUIREMENTS

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

1.2 GENERAL INTENTION

A. Contractor shall completely prepare site for building operations, including demolition and removal of existing structures, and furnish labor and materials and perform work for project #523A5-17-006 Lead Removal Building 61 & 62 B as required by drawings and specifications.

B. Visits to the site by Bidders may be made only by appointment with the VA Contracting Officer.

C. NA

D. Before placement and installation of work subject to tests the Contractor shall coordinate and notify the Project Engineer in sufficient time to enable testing personnel to be present at the site in time for proper testing and field inspection. Such prior notice shall be not less than two (2) weeks unless otherwise designated by the Project Engineer.

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

1.3 STATEMENT OF BID ITEM(S)

A. ITEM I, #523A5-17-006 Lead Removal Building 61 & 62: This project includes the following:

1. Bldg. 61 – Removal of Lead paint coated window sills. 58 Window Sills.
2. Bldg. 61 – Removal of Lead paint coated window frames. 58 Window frames.
3. Bldg. 62 – Removal of Lead paint coated Interior Doors. 10 Interior Doors.
4. Bldg. 62 – Removal of Lead paint coated Door Frames. 11 Door Frames.
5. Bldg. 62 – Work to include patch, repair and paint as needed on all frames

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. The general contractor shall generate a site specific security plan for VA Project Engineer and Contracting Officer review prior to mobilizing onsite.

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. In accordance with VA Directive 0735 Personal Identity Verification of Federal Employees and Contractors, all contractors on VA premises are require to obtain proper identification cards. The following information describes the criteria for each type of identification card. The contractor is responsible to review the following information & make a determination in order to make the appropriate PIV badge request to both the VA Project Engineer and Contracting Officer. Final determination is made by VA Project Engineer and Contracting Officer.

   PIV CARD is required for all unsupervised, full time, logical and/or physical access for more than 6 months OR more than 180 aggregate days in one year period. In this description unsupervised is to mean unescorted by VA personnel into areas off public corridors that would require the possession of a key or being granted access control privileges to enter through a secured door. Time onsite is determined by the Period of Performance of the contract/task order

and is to include all prime and sub-contractor personnel (to include sub-subcontractors) regardless of the actual personal time on site. The issuance of a PIV Card requires two forms of acceptable identification, a favorable SAC adjudication and an initiated National Agency Check with Written Inquiries (NACI).

Non-PIV CARD is required for all unsupervised, full time, logical and/or physical access for less than 6 months OR less than 180 aggregate days in one year period. In this description unsupervised is to mean unescorted by VA personnel into areas off public corridors that would require the possession of a key or being granted access control privileges to enter through a secured door. Time onsite is determined by the Period of Performance of the contract/task order and is to include all prime and sub-contractor personnel (to include sub-subcontractors) regardless of the actual personal time on site. The issuance of a Non-PIV Card requires two forms of acceptable identification and a favorable SAC adjudication.

Flash Badge is required for common access ONLY for less than 6 months or less than 180 aggregate days in one year period. Time onsite is determined by the Period of Performance of the contract/task order and is to include all prime and sub-contractor personnel (to include sub-subcontractors) regardless of the actual personal time on site. The issuance of a Flash Badge requires one form of acceptable identification.

C. Contractors are required to submit to the Contracting Officer a list of personnel to be mobilized for the work associated with the contract/task order scope of work to be completed under this specification to the CO and COTR. The list is to include current status of SAC background investigation, i.e. – SAC + NACI, date completed; SAC, date completed; none.

D. Determination of the level of identification required will be based on the contract/task order scope of work and level of access required. The final determination will be made by the VA Project Engineer and Contracting Officer.

E. Contractors are to contact the COTR regarding credentialing requirements.

F. COTR will facilitate contractor submission of information through the CO, PIV Sponsor and PIV Office at the Medical Center to obtain proper credentials for each contractor personnel to be on campus to complete the contract/task order scope of work to be completed under this specification.

G. Instructions to obtain badges: The general contractor shall complete the PIV form application & submit PIV, Flash & Non-PIV card requests to the Engineering PIV Sponsor via email. Sponsor submits the request into a software application to Human Resources & will contact individuals who submitted the application. The PIV card requires a fingerprint check along with the initiation of a NACI background check. If the results are returned favorably, Human Resources contact the PIV Sponsor to have the contractor report to the PIV Office to have their photograph taken & issued their card.

2. For working outside the “regular hours” as defined in the contract, The General Contractor shall give 5 business days’ notice to the CO and COTR so that notifications can be distributed if needed, services informed and coordinated with and so VA Police & Engineering M&O are made aware. This notice is separate from any notices required for utility shutdown described later in the contract documents.

3. No photography of VA premises is allowed without written permission of the Contracting Officer and VA Police.

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.

H. Newly Installed Key Control:

1. The General Contractor shall provide duplicate keys and lock combinations to the COTR and VA Locksmith 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.

I. 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 (2 to 5) permits shall be issued for General Contractor and its employees for parking in designated areas only. General Contractor and sub-contractors shall park in the designated contractor parking lot at VHA BHS Brockton VA Medical Center campus. The general contractor and sub-contractors shall not park in reserved parking lots, reserved parking spots, front-of-building parking spots, or any other VA official designated parking spot. Front-of-building parking shall be available for patients. General contractor and sub-contractor parking shall be at designate contractor parking lot or (if approved by VA Project Engineer and Contracting Officer), in public parking lots in spots that are farthest from the building work will occur in.

1.6 OPERATIONS AND STORAGE AREAS

A. The Contractor shall confine all operations (including storage of materials) on Government premises to areas authorized or approved by the Contracting Officer. The Contractor shall hold and save the Government, its officers and agents, free and harmless from liability of any nature occasioned by the Contractor's performance. The general contractor shall provide a written request, at a minimum of 2 weeks prior to planned mobilization and construction commencement, a request to the VA Project Engineer and Contracting Officer to store any materials within VA interior spaces. Request shall include a detailed inventory of materials being requested to be stored, quantities of each material, material safety data sheet (and globally harmonized system of classification) information of each material, approximate duration of anticipated storage being requested, how the material will be stored, where in the requested space each material will be stored, etc.

B. Temporary buildings (e.g., storage sheds, shops, conex trailers, offices) and utilities may be erected by the Contractor only with the approval of the VA Project Engineer and Contracting Officer and shall be built with labor and materials furnished by the Contractor without expense to the Government. The temporary buildings and utilities shall remain the property of the Contractor and shall be removed by the Contractor at its expense upon completion of the work.

C. The Contractor shall, under regulations prescribed by the Contracting Officer, use only established roadways, or use temporary roadways constructed by the Contractor when and as authorized by the Contracting Officer. When materials are transported in prosecuting the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any Federal, State, or local law or regulation. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.

D. Working space and space available for storing materials shall be as determined by the VA Project Engineer & Contracting Officer. See subpar A above for the required request details.

E. Workmen are subject to rules of Medical Center applicable to their conduct.

F. Execute work so as to interfere as little as possible with normal functioning of Medical Center as a whole, including operations of utility services, fire protection systems and any existing equipment, and with work being done by others. 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 VA Project Engineer & Contracting Officer. Project #523A5-17-002 Specialty Clinic Phase II includes work adjacent patient care exam rooms and occupied spaces; work shall perform so as to not interfere with medical center operations, business or patient care. Work that will transmit vibrations, create noise, etc. are required to be performed during other than normal business hours, specifically other than hours the adjacent patient care exam rooms and occupied

business spaces are not conducting patient care or business. The general contractor shall bear the cost to perform the required off-hour work. The general contractor shall plan-ahead and determine what work (i.e. demolition, powder actuated power tool work, select construction activities, public corridor work, door & frame replacement, etc.) could interfere with medical center operations, business or patient care and plan to perform these activities during other than normal business hours. No additional time or moneys shall be provided to the general contractor for not planning ahead with disruptive work in an occupied patient care ward.

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.

G. Phasing:

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

To insure such executions, Contractor shall furnish the VA Project Engineer & Contracting Officer with a realistic construction schedule of approximate phasing dates on which the Contractor intends to accomplish work in each specific area of site, building or portion thereof. In addition, Contractor shall submit a request to the VA

Project Engineer & Contracting Officer at a minimum of three (3) weeks in advance of each proposed date of starting work in each specific area of site, building or portion thereof. If the written request is not accepted by the VA Project Engineer or Contracting Officer, the general contractor shall revise and resubmit the notification at a minimum of two (2) weeks in advance of the new proposed date of starting work from the newly submitted date of the revised request. Arrange such phasing dates to insure accomplishment of this work in successive phases mutually agreeable to Medical Center Director, Chief Engineering, Engineering Manager, Radiology Nurse Managers and staff and the VA Project Engineer & Contracting Officer.

I. Construction Fence: Before construction operations begin, Contractor shall provide a chain link construction fence, 2.1m (seven feet) minimum height, around the construction area/lay-down area/dumpster location/etc. that was requested by the general contractor and accepted by the VA Project Engineer and Contracting Officer prior to construction commencement or mobilization. Provide gates as required for access with necessary hardware, including hasps and padlocks. Provide three(3) keys to VA Project Engineer. Fasten fence fabric to terminal posts with tension bands and to line posts and top and bottom rails with tie wires spaced at maximum 375mm (15 inches). Bottom of fences shall extend to 25mm (one inch) above grade. Construction fence shall be entirely wrapped (full fence height and length) with heavy-duty knitted HDPE construction coupled high grade privacy fence screen. Screen shall be mold and mildew resistant. Privacy screen material shall conform to ASTM D-5041. Privacy screen shall be enforced with 12 gauge galvanized steel, hog ring C shaped fasteners that are crimped into the grommet holes for a secure and strong attachment. Remove the fence when directed by VA Project Engineer & Contracting Officer.

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

1. Contractor shall maintain 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.

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

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 VA Project Engineer & Contracting Officer, Chief Engineer or Chief of Facilities Management. Electrical work shall be accomplished with all affected circuits or equipment de-energized.

2. Contractor shall submit a request to interrupt any such services to VA Project Engineer & Contracting Officer, in writing, three (3) weeks in advance of proposed interruption. Request shall state reason, date, exact time of, and approximate duration of such interruption. It shall include a smoke shunt request if applicable with the smoke detector device identification codes.

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. Most utility service interruptions shall be performed during other than normal business hours. VA Safety does not permit two fire protection systems (smokes and sprinklers) to be off line at the same time. The general contractor shall plan for this.

4. Major interruptions of any system must be requested, in writing, at least three (3) weeks prior to the desired time and shall be performed as directed by the VA Project Engineer & Contracting Officer.

5. In case of a contract construction emergency, service will be interrupted on approval of VA Project Engineer & Contracting Officer. Such approval will be confirmed in writing as soon as practical.

6. Whenever it is required that a connection fee be paid to a public utility provider for new permanent service to the construction project, for such items as water, sewer, electricity, gas or steam, payment of such fee shall be the responsibility of the Contractor.

L. Abandoned Lines: All service lines such as wires, cables, conduits, ducts, pipes and the like, and their hangers or supports, not in use within rooms B-132, B-132A, B-132B, and A-133 shall be entirely removed back to the main, branch or panel they originate from. No lines are permitted to be abandoned including dead legs.

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

1. Keep roads, walks and entrances to grounds, to parking, building entrances, building loading docks, corridors, tunnel system, public corridors, and stairwells and to occupied areas of buildings clear of construction materials, debris and standing construction equipment and vehicles.

N. Coordinate the work for this contract with other construction operations as directed by VA Project Engineer & Contracting Officer.

1.7 ALTERATIONS

See 1.11 COORDINATION Pre-worksite Re-visit Requirements for additional requirements.

A. Survey: Before any work is started, the Contractor shall make a thorough survey with the VA Project Engineer & Contracting Officer and a representative of VA Supply Service, of buildings, areas of buildings in which alterations occur and areas which are anticipated routes of

access, and furnish a report, signed by all three, to the Contracting Officer. This report shall list by rooms and spaces:

1. Existing condition and types of 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 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 VA Project Engineer & Contracting Officer.

B. Any items required to be either reused or relocated or both, found during this survey to be nonexistent, or in opinion of VA Project Engineer & Contracting Officer and/or Supply Representative, to be in such condition that their use is impossible or impractical, shall be furnished and/or replaced by Contractor with new items in accordance with specifications which will be furnished by Government. Provided the contract work is changed by reason of this subparagraph B, the contract will be modified accordingly

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

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

D. Protection: Provide the following protective measures:

1. Wherever existing roof surfaces or exterior envelopes 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 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 VA Project Engineer & Contracting Officer.

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, 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

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 is not to be removed and which does not unreasonably interfere with the work required under this contract. The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract performance, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Officer.

B. The Contractor shall protect from damage all existing improvements and utilities at or near the work site and on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. The Contractor shall repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.

C. Refer to Section 01 57 19, TEMPORARY ENVIRONMENTAL CONTROLS, for additional requirements on protecting vegetation, soils and the environment. Refer to Articles, "Alterations", "Restoration", and "Operations and Storage Areas" for additional instructions concerning repair of damage to structures and site improvements.

D. The Contractor is prohibited from using VA dumpsters. The Contractor shall furnish and pay for all dumpsters required to legally remove construction debris from the VA Medical Center. The contractor shall request placement of a dumpster onto VA property through a written request to the VA Project Engineer identifying on a marked-up site plan (using Google Earth screen shot) the approximate proposed location of dumpster(s). Request shall include dumpster cut-sheet showing size. Request shall include cut-sheet of the planned dumpster cover to be utilized. Dumpster shall not impact roadways, parking lots, ramps,

entrances/exits, access to exterior equipment, hydrants, Siamese fire pipe connections/PIV, underground utilities, manholes, etc. If during the period of performance, the government requires the contractor's dumpster is required to be relocated for special events, construction work, emergency repairs, security concerns, or any other reasoning, the contractor shall bear the cost to relocate the dumpster to the new approved dumpster location at no additional cost to the government.

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 VA Project Engineer & Contracting Officer. Existing work to be altered or extended and that is found to be defective in any way, shall be reported to the VA Project Engineer & Contracting Officer before it is disturbed. Materials and workmanship used in restoring work shall conform in type and quality to that of original existing construction, except as otherwise shown or specified.

B. Upon completion of contract, deliver work complete and undamaged. Existing work (walls, ceilings, partitions, floors, mechanical and electrical work, lawns, paving, roads, walks, etc.) disturbed or removed as a result of performing required new work, shall be patched, repaired, reinstalled, or replaced with new work, and refinished and left in as good condition as existed before commencing work.

C. At Contractor's own expense, Contractor shall immediately restore to service and repair any damage caused by Contractor's workmen to existing piping and conduits, wires, cables, etc., of utility services or of fire protection systems and communications systems (including telephone) which are not scheduled for discontinuance or removal.

1.11 COORDINATION - COORDINATE WORK AND PRODUCTS MEETING THE REQUIREMENTS ASSOCIATED WITH ALL APPLICABLE SPECIFICATION SECTIONS AND PLANS TO PRODUCE A SYSTEM COMPLETE, FUNCTIONAL AND READY FOR THE PURPOSE INTENDED.

A. Pre-worksite Re-visit Requirements … Before starting work in a particular area, visit the worksite and carefully examine the areas to verify complexity, existing conditions and difficulties that will affect work including all work done under various specification

sections and the VA. Commencement of work shall be construed as acceptance of the existing conditions and difficulties. No change to the contract price or schedule shall be allowed for work caused by unfamiliarity with the site conditions that are visible or readily construed by an observer.

B. Coordinate the location of all work, equipment and components with all trades and equipment installers to prevent interferences, and maintain proper use and access to all items and spaces. General Contractor is responsible for coordinating all equipment and components being installed with the placement location and dimension requirements. Prior to job execution each trade shall submit “complete” coordinated shop drawings indicating all equipment and material layouts with locations from walls/columns, bottom/top elevations, vibration isolators, supports, dimensions, utility requirements and equipment submittal numbers. Each trade shall maintain a set of working drawings to document as-built information as the work progresses and submit to the Project Engineer monthly for review.

C. New work shall be installed and connected to existing work neatly and carefully. All work shall be coordinated with other trades to avoid conflicts and to obtain a neat competent installation that will afford maximum accessibility for easy and proper operation, maintenance, service and headroom. All work shall be installed in a manner that permits easy accessibility and proper removal of system components requiring periodic service. Disturbed or damaged work shall be replaced or repaired to new conditions at the cost of the general contractor. Any items determined to be in non-compliance shall be corrected by the Contractor at no additional expense to the Government.

D. The drawings show or describe the general arrangement of equipment, articles, assemblies, appurtenances but do not show all required fittings, drains, air vents, supports and may not identify all required accessories, components, fittings, and offsets that are necessary to properly complete the installation for the purpose intended. The contract drawings are diagrammatic only intended to show general layout of conduit, ductwork, piping, equipment, terminals, specialties and not intended to show all required offsets, details, accessories and

equipment to be connected. Provide all necessary fittings, offsets and pipe runs based on field measurements and reviewed coordination drawings. Coordinate with other trades for space available and relative location of equipment and accessories to be connected at all locations. The Contractor shall alter locations of items where necessary to avoid interference and clearance difficulties. Locations of components and equipment shall be adjusted to accommodate the work with interferences anticipated and encountered. The Contractor shall determine the exact routing and location of systems prior to fabrication and installation. Accurate field measurements and coordination drawings shall be prepared to establish the locations and characteristics of the various systems (new and existing to remain). It is the intent of the drawings/specifications that the Contractor provides all materials, labor and coordination necessary to complete the work described or implied by the contract documents at no additional cost/time to the Government. The Contractor shall propose with submitted coordination drawings other dimensions with similar characteristics where necessary to avoid interferences and clearance difficulties. Should the contract documents not agree with themselves the greater quantity of superior work and materials shall be performed.

E. Coordinate all mechanical (e.g., HVAC), electrical, plumbing (MEP) utility service, fire protection sprinkler system shutdowns and space access three (3) weeks in advance with the Project Engineer. Due to facility scheduling and access difficulties, some shutdowns and the performance of certain work will need to be performed during off-hours by the Contractor. Arrange phases and perform work to insure utility services for other buildings and areas at all times as required.

F. Before placement and installation of work subject to tests the Contractor shall coordinate and notify the Project Engineer in sufficient time to enable testing personnel to be present at the site in time for proper testing and field inspection. Such prior notice shall be not less than two (2) weeks unless otherwise designated by the Project Engineer.

1.12 RELATED WORK – MINIMUM WORK PERFORMANCE REQUIREMENTS. **NO STATEMENTS HERE IN SHALL RELIEVE THE CONTRACTOR OF RESPONSIBILITIES DESCRIBED ELSEWHERE IN THE CONTRACT DOCUMENTS.**

A. General Contractor shall assure that all trades are aware of their respective full scope of work. Contractor shall procure all necessary permits and inspections. Refer to all contract drawings, specifications and notes for additional responsibilities, details and scope of work. All work shall be performed by personnel properly skilled (& certified and licensed) in the task they are performing and aware of their project responsibilities. Workmanship shall be the best of their respective kind using the most modern approved methods and materials. General Contractor shall directly supervise all phases of construction, and the supervisor shall have full authority to act on field conditions associated with all trades to prevent construction delays. Daily work logs shall be issued to the VA Project Engineer describing in detail the manpower, man-hours, work performed by each trade.

B. Information on existing conditions and proposed design solutions described in the contract documents are based on non-destructive testing and visual site investigation observations accessible in an occupied structure. Locations of components are approximate and information provided is diagrammatic. In some instances, it may have been impracticable to detail all the items in the specifications or on the drawings because of variances in the methods of achieving the necessary results. In such instances, the Contractor shall furnish all labor, materials, drawings, services and connections necessary not limited to the information provided to produce systems, appurtenances and equipment which are complete, functional and ready for proper operation by facility personnel for the purpose intended in accordance with their needs and the requirements of the manufacturers at no additional cost/time to the Government. All work shall be performed within the requirements of the General Conditions, General Requirements, Drawings, Specifications and Notes. Prior to the Offer Opening Date the Contractor is highly advised to visit the facility and carefully examine the conditions/difficulties that will affect construction to avoid problems that may be caused by unfamiliarity with conditions/difficulties that are either visible or readily construed by an observer.

C. Provide all necessary labor, material and coordination to complete the work described or implied by the construction documents at no additional cost or time to the Government. All equipment, components, materials, and articles furnished under the contract shall be new and free from defects, and be of the most suitable grade, size and capacity for the purpose intended, unless otherwise either specified or approved by the VA Project Engineer.

D. All materials, equipment, components, articles, and assemblies installed shall be complete for operation, service and maintenance for the purpose intended not limited to the details and information provided. All materials, equipment, components, articles, assemblies and execution shall be in conformance with the contract documents, manufacturer’s written procedures and recommendations, latest editions of all applicable Federal/State/City codes/regulations/ordinances, and the jurisdiction having authority (JHA) on the applicable work. Except where specific dates are given, the issue (including amendments, addenda, revisions, supplements, and errata) in effect on the date of Invitation for Bids shall be applicable. In the event that criteria requirements conflict, the most stringent requirement (the greater quantity of superior work and materials) shall be met.

E. Verify all dimensions, clearances, information and assumptions on existing conditions. All work shall be performed within approved tolerances, meet the requirements of the manufacturer and be neat, straight, plumb, level, smooth. Contractor is responsible for reviewing all contract documents for discrepancies prior to commencing any and all work. Contractor shall notify the VA Project Engineer of any variances with adequate time so that alternate solutions can be established without disrupting the established construction schedule. Data and information furnished or referred to in the construction documents is for the Contractor’s use. The Government assumes no responsibility for any interpretation of or conclusion drawn from the data or information made by the contractor based on the information made available by the Government. Nor does the Government assume responsibility for any understanding reached or representation made concerning conditions that can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in the contract.

F. Properly relocate any existing systems (including but not limited to plumbing/steam lines, ducts, pipes, conduits, hangers, fixtures, surface mounted devices, suspension systems) considered interfering with the installation of new construction at no additional expense to the Government, and after confirming plans with the VA Project Engineer. This will include the relocation and/or reinstallation of items within the construction boundaries to perform and complete all necessary work as required.

G. At all times during performance of this contract and until all work is completed and accepted, the Contractor shall assign a competent Superintendent and QC Representative who have authority to act for the Contractor. The competent personnel shall be responsible for, but not limited to the following, as assigned:

I. Work coordination of all trades and all material delivery.

II. Verify that all delivered materials match the approved submittals.

III. Establish procedures to insure compliance with all contract requirements.

IV. Prepare daily work logs, daily sign-in sheets and monitor progress with respect to the schedule.

V. Plan ahead of each trade in preparation for the next trade to perform work.

VI. Monitor the performance of each trade for compliance with the requirements.

VII. Insure that each trade meets their responsibilities with respect to the requirements.

VIII. Report results of coordination, material delivery, contract compliance, progress plans, and performance to the VA Project Engineer in a timely manner.

IX. Arrange phases and perform work to insure utility services for other buildings and areas at all times as required.

X. Safety & Infection Control requirements: ILSM, ICRA, GEMS and Patient Safety.

References to the APPLICABLE PUBLICATIONS are a minimum requirement standard. Except where a specific date is given the issue (including amendments, addenda, revisions, supplements, and errata) in effect on the date of Invitation for Bids shall be applicable. Drawings and specification sections shall govern in those instances where contract document requirements are greater than those specified in the APPLICABLE PUBLICATION.

1.13 CONSTRUCTION COMMENCEMENT **CONTRACTOR SHALL PROCEED WITH CONSTRUCTION ONLY AFTER VETERANS AFFAIRS' ACCEPTANCE OF "ALL" REQUIRED SUBMITTALS AND COORDINATION DRAWINGS.**

1.14 AS-BUILT DRAWINGS

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

B. All variations shall be shown in detail (i.e. common industry practice to take three (3) field measurements to permanent features such as fittings and valves). To insure compliance, as-built drawings shall be made available for the VA Project Engineer review, as often as requested.

C. Contractor shall deliver two approved completed sets of as-built drawings to the VA Project Engineer & Contracting Officer within 15 calendar days after each completed phase and after the acceptance of the project by the VA Project Engineer & Contracting Officer.

D. Paragraphs A, B, & C shall also apply to all shop drawings.

1.15 USE OF ROADWAYS

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

1.16 NOT INCLUDED

1.17 TEMPORARY USE OF MECHANICAL AND ELECTRICAL EQUIPMENT

A. Use of new installed mechanical and electrical equipment to provide heat, ventilation, plumbing, light and power will be permitted subject to written approval and compliance with the following provisions:

1. Permission to use each unit or system must be given by VA Project Engineer & Contracting Officer in writing. If the equipment is not installed and maintained in accordance with the written agreement and following provisions, the VA Project Engineer & Contracting Officer 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.

1.18 TEMPORARY USE OF EXISTING ELEVATORS

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

1. Contractor makes all arrangements with the VA Project Engineer & Contracting Officer for use of elevators. The VA Project Engineer & Contracting Officer will ascertain that elevators are in proper condition. Contractor may use service elevator No.S-6 in Building No. 3 for daily use. 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. Government will accept hoisting ropes of elevator and rope of each speed governor if they are worn under normal operation. However, if these ropes are damaged by action of foreign matter such as sand, lime, grit, stones, etc., during temporary use, they shall be removed and replaced by new hoisting ropes at the contractor’s expense.

4. If brake lining of elevators are excessively worn or damaged during temporary use, they shall be removed and replaced by new brake lining at the contractor’s expense.

5. All parts of main controller, starter, relay panel, selector, etc., worn or damaged during temporary use shall be removed and replaced with new parts at the contractor’s expense, if recommended by elevator inspector after elevator is released by Contractor.

6. 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.

1.19 NOT INCLUDED

1.20 TEMPORARY TOILETS – GENERAL CONTRACTOR AND SUB-CONTRACTORS ARE NOT PERMITTED OR AUTHORIZED TO USE GOVERNMENT RESTROOMS.

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

1.21 AVAILABILITY AND USE OF UTILITY SERVICES

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

B. The Contractor, at Contractor's expense and in a workmanlike manner, in compliance with code and as satisfactory to the Contracting Officer, shall install and maintain all necessary temporary connections and distribution lines, and all meters required to measure the amount of electricity used for the purpose of determining charges. Before final acceptance of the work by the Government, the Contractor shall remove all the temporary connections, distribution lines, meters, and

associated paraphernalia and repair restore the infrastructure as required.

C. Contractor shall install meters at Contractor's expense and furnish the Medical Center a monthly record of the Contractor's usage of electricity as hereinafter specified.

D. Heat: Furnish temporary heat necessary to prevent injury to work and materials through dampness and cold. Use of open salamanders or any temporary heating devices which may be fire hazards or may smoke and damage finished work, will not be permitted. Maintain minimum temperatures as specified for various materials:

1. Obtain heat by connecting to Medical Center heating distribution system.

    a. Steam is available at no cost to Contractor.

E. Electricity (for Construction and Testing): Furnish all temporary electric services.

1. Obtain electricity by connecting to the Medical Center electrical distribution system. The Contractor shall meter and pay for electricity required for electric cranes and hoisting devices, electrical welding devices and any electrical heating devices providing temporary heat. Electricity for all other uses is available at no cost to the Contractor.

F. Water (for Construction and Testing): Furnish temporary water service.

1. Obtain water by connecting to the Medical Center water distribution system. Provide reduced pressure backflow preventer at each connection 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 of use of water from Medical Center's system.

1.22 NOT INCLUDED

1.23 TESTS

A. 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 and VA Project Engineer. 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.

E. All related components as defined above shall be functioning when any system component is tested. Tests shall be completed within a reasonable period of time during which operating and environmental conditions remain reasonably constant and are typical of the design conditions.

F. Individual test result of any component, where required, will only be accepted when submitted with the test results of related components and of the entire system.

1.24 INSTRUCTIONS

A. Contractor shall furnish Maintenance and Operating manuals (hard copies and electronic at the same time) and verbal instructions when required by the various sections of the specifications and as hereinafter specified.

B. Manuals: Maintenance and operating manuals and two (2) compact discs (four hard copies and two electronic copy each) for each separate piece of equipment shall be delivered to the VA Project Engineer & Contracting Officer 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 VA Project Engineer & Contracting Officer and shall be considered concluded only when the VA Project Engineer & Contracting Officer 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 VA Project Engineer & Contracting Officer, does not demonstrate sufficient qualifications in accordance with requirements for instructors above.

1.25 GOVERNMENT-FURNISHED PROPERTY

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

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

C. Storage space will be provided by the Government for equipment furnished by government to be installed by Contractor, and the Contractor shall be prepared to unload and store such equipment therein upon its receipt at the Medical Center.

D. Notify VA Project Engineer and Contracting Officer in writing, 60 days in advance, of date on which Contractor will be prepared to receive equipment furnished by Government. Arrangements will then be made by the Government for delivery of equipment.

1. Immediately upon delivery of equipment, Contractor shall arrange for a joint inspection thereof with a representative of the Government. At such time the Contractor shall acknowledge receipt of equipment described, make notations, and immediately furnish the Government representative with a written statement as to its condition or shortages.

2. Contractor thereafter is responsible for such equipment until such time as acceptance of contract work is made by the Government.

E. Equipment furnished by the Government will be delivered in a partially assembled (knock down) condition in accordance with existing standard

commercial practices, complete with all fittings, fastenings, and appliances necessary for connections to respective services installed under contract. All fittings and appliances (i.e., couplings, ells, tees, nipples, piping, conduits, cables, and the like) necessary to make the connection between the Government furnished equipment item and the utility stub-up shall be furnished and installed by the contractor at no additional cost to the Government.

F. Completely assemble and install the Government furnished equipment in place ready for proper operation in accordance with specifications and drawings.

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

1.26 RELOCATED EQUIPMENT AND/OR ITEMS

A. Contractor shall disconnect, dismantle as necessary, remove and reinstall in new location, all existing equipment and items 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 VA Project Engineer & Contracting Officer.

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. Contractor shall employ services of an installation engineer, who is an authorized representative of the manufacturer of this equipment to supervise assembly and installation of existing equipment, required to be relocated.

F. All service lines such as noted above for relocated equipment shall be in place at point of relocation ready for use before any existing equipment is disconnected. Make relocated existing equipment ready for operation or use immediately after reinstallation.

1.27 NOT INCLUDED

1.28 NOT INCLUDED

1.29 SAFETY BOARD

A. Provide a Safety Board where directed by VA Project Engineer, Contracting Officer and Safety Specialist. The safety board shall include, but not be limited to the following items:

1. Interim Life Safety Measure finalized & signed determination, Infection Control Risk Assessment finalized & signed determination, Green Environmental Management System finalized & signed determination and Patient Safety Risk assessment finalized & signed determination.

2. Site specific emergency contact information. Shall include project title, project #, project information, VA Project Engineer contact info, VA Contracting Officer contact info, VA Safety Specialist contact info, Site Superintendent 24/7 contact info, Site superintendent alternate 24/7 contact info, etc.

3. Construction site fire response procedures and evacuation plan showing route of egress from construction site(s).

4. Post the number of accident free days on a daily basis.

5. Post emergency force contact information, shall include but not be limited to , Brockton Fire Department contact info, Brockton Police Department contact info, VHA BHS Brockton Police contact info, nearest hospital with directions & contact info, etc.

1.30 PHOTOGRAPHIC DOCUMENTATION

A. During the construction period through completion, provide photographic documentation of construction progress and at selected milestones (i.e. prior to demolition, after demolition and cleanup, after wall construction & MEP rough-in but prior to wall closed-up, above ceilings before ACT installed, etc.). The electronic photos

shall be presented weekly to the Project Engineer on a compact disk or DVD. Photos shall have dates superimposed on them. Electronic documents shall be in jpeg format or compatible.

A. Photographic documentation elements:

XI. Before construction. Overlapping photographic techniques shall be used to insure maximum coverage.

XII. Construction progress for all trades shall be tracked at pre-determined intervals, but not less than once every thirty (30) calendar days (“Progressions”) or as required by the Project Engineer. Progression documentation shall track interior construction of the building. Interior Progressions shall track interior improvements beginning when stud work commences and continuing until Project completion.

XIII. As-built condition of utilities shall be documented. This process shall include all utilities within the building(s) envelope(s) and utility runs in the immediate vicinity of the building(s) envelope(s). Overlapping photographic techniques shall be used to insure maximum coverage.

XIV. As-built conditions of mechanical, electrical, plumbing and all other systems shall be documented post-inspection and pre-insulation, sheet rock or dry wall installation. This process shall include all finished systems located in the walls and ceilings of all buildings at the Project. Overlapping photographic techniques shall be used to insure maximum coverage.

XV. As-built finished conditions of the interior of each building including floors, ceilings and walls shall be documented at certificate of occupancy or equivalent, or just prior to occupancy, or both, as directed by the Project Engineer. Overlapping photographic techniques shall be used to insure maximum coverage.

XVI. Miscellaneous events as requested by the Project Engineer.

XVII. Weekly Site Progressions - Photographic documentation capturing the project at different stages of construction. These progressions shall capture underground utilities, excavation, grading, backfill,

landscaping and road construction throughout the duration of the project.

XVIII. Regular interior progressions of all walls of the entire project to begin at time of substantial framed or as directed by the Project Engineer through to completion.

XIX. Detailed Interior exact built overlapping photos of the entire building to include documentation of all mechanical, electrical and plumbing systems in every wall and ceiling, to be conducted after rough-ins are complete, just prior to insulation and or drywall, or as directed by Project Engineer.

XX. Finished detailed Interior exact built overlapping photos of all walls, ceilings, and floors to be scheduled by Project Engineer prior to occupancy.

XXI. Images must show distinctly, at as large a scale as possible, all parts of work embraced in the picture.

1.31 NOT INCLUDED

1.32 HISTORIC PRESERVATION

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

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DEPARTMENT OF VETERANS AFFAIRS – BOSTON HEALTHCARE SYSTEM

INTERIM LIFE SAFETY MEASURES (ILSM) DETERMINATION

Project Name:	Project Number:
Construction & Impact Description:	Construction Location: Affected Areas:
Project COTR:	Project Start Date:
Project CPs:	Estimated Duration:
	Completion Date:
Contractor:	
GC Supervisor:	Telephone:
Contractor CP:	

Implementation Checklist:

☐ It is determined that the above construction project DOES NOT warrant implementation of the ILSM Program, based on evaluation of the project.

If the above is checked and completed, stop here, sign below and file in project folder.

☐ It is determined that the above construction project DOES warrant implementation of the ILSM Program.

☐ Review of construction scope relative to the applicable ILSM administrative actions.

☐ Notify Contractor of their responsibilities relative to ILSM.

Date Meeting was held: _____

Person/s Present: _____

☐ Develop a plan and train both appropriate hospital staff as well as construction personnel relative to ILSM including a written and signed document attesting to said training.

☐ Contractor shall provide daily inspections and reports on construction site relative to ILSM.

☐ Notify the Safety Officer relative to any and all potential fire alarm, sprinkler system, smoke detector system etc. shut downs. Modifications, etc. that require actual shut downs must have the ILSM in effect relative to an equivalent system protection.

☐ Multidisciplinary team has been notified and concurs with plan.

☐ Multidisciplinary team will review and document weekly or other intervals as decided by the team.
Reviews to be done: _____

Signature/Date: _____ _____

Project CPs Safety Officer

_____

GC Supervisor / Contractor CP

INTERIM LIFE SAFETY MEASURES – ADMINISTRATIVE ACTIONS

Applicable Action YES– NO – NA	ILSM Administrative Action
	Ensuring exits provide free and unobstructed egress. Personnel shall receive training if alternate exists must be designated. Building or areas under construction must maintain escape facilities for construction workers at all times. Means of egress in construction areas must be inspected daily.
	Ensuring free and unobstructed access to emergency services and for emergency forces.
	Ensuring fire alarm, detection, and suppression systems are not impaired. A temporary, but equivalent system shall be provided when any fire system is impaired. Temporary systems must be inspected and tested monthly.
	Ensuring temporary construction partitions are smoke tight and built of noncombustible or limited combustible material that will not contribute to the development or spread of the fire.
	Providing additional fire-fighting equipment and use training.
	Prohibiting smoking in accordance with MA.1.3.15 and in or adjacent to all construction areas.
	Developing & enforcing storage, housekeeping, debris removal practices that reduce the flammable and combustible fire load of the building to the lowest level necessary for daily operations.
	Conducting a minimum of two fire drills per shift per quarter.
	Increasing hazard surveillance of buildings, grounds, and equipment, with special attention to excavation, construction areas, construction storage, and field offices.
	Training personnel when structural or compartmentation features of fire safety are compromised.
	Conducting safety education programs to ensure awareness of any construction hazards, Life Safety Code deficiencies, and these Interim Life Safety Measures.
	Conduct infection control risk assessment (ICRA) and green environmental management (GEMS) assessment.

DEPARTMENT OF VETERANS AFFAIRS – BOSTON HEALTHCARE SYSTEM

INFECTION CONTROL RISK ASSESSMENT (ICRA) CHECKLIST FORM

Project Name:	Project Number:
Construction & Impact Description:	Construction Locations: Affected Areas:
Project COTR:	Project Start Date:
Project CPs:	Estimated Duration:
	Completion Date:
Contractor:	
GC Supervisor:	Telephone:
Contractor CP:	

YES	NO	CONSTRUCTION ACTIVITY TYPE	YES	NO	IC PATIENT RISK GROUP
		TYPE A: Inspection, non-invasive activities, minimum dust levels			GROUP 1: Low Risk
		TYPE B: Small scale, short duration, moderate dust levels			GROUP 2: Medium Risk
		TYPE C: Generates moderate to high levels of dust, requires greater than one work shift for completion			GROUP 3: Medium/High Risk
		TYPE D: Major duration and construction activities requiring consecutive work shifts			GROUP 4: Highest Risk
CLASS PRECAUTION: *Based on Construction Activity & Risk Group*					Class … I … II … III … IV

Implementation Checklist:

- ☐ Review construction scope relative to the applicable ICRA administrative actions.
- ☐ Notify Contractor of their responsibilities relative to ICRA.
  - Date Meeting was held: _____
  - Person/s Present: _____
- ☐ Develop a plan and train both appropriate hospital staff as well as construction personnel relative to ICRA including a written and signed document attesting to said training.
- ☐ Contractor shall provide daily inspections and reports on construction site relative to ICRA.
- ☐ Notify the Infection Control Practitioner relative to any and all potential infection control deficiencies.
- ☐ Multidisciplinary team has been notified and concurs with plan.
- ☐ Multidisciplinary team will review and document weekly or other intervals as decided by the team.
  - Reviews to be done _____

Signature/Date: _____ _____

Project CPs — Infection Control Practitioner

_____

GC Supervisor / Contractor CP

INFECTION CONTROL RISK ASSESSMENT – ADMINISTRATIVE ACTIONS

Applicable Action YES – NO – NA	ICRA Administrative Action
	Tightly seal construction perimeter and inspect critical barriers for integrity. Verify negative air pressure with airflow from clean (hospital/clinic/support spaces) to dirty areas (construction areas).
	Construction site has proper traffic flow and warning signage. Demonstrate compliance with traffic flow patterns including demolition/construction movement.
	Track dirt compliance aids are in place at the doors leading to the hospital/clinic/support spaces. Housekeeping performed frequently to prevent accumulation and spread of dirt and fine dust including regular HEPA vacuuming and damp wiping construction perimeter barriers.
	Demonstrate active means that prevents airborne particles from migrating to hospital, clinical, support care areas including: HEPA vacuums, automatic self-closing construction doors, appropriate exhaust machines, debris chutes.
	Block off, seal, remove or isolate open pipes, open conduits, penetrations, barrier punctures, HVAC system air vents in work area to prevent dirt and fine dust migration.
	Surfaces in adjacent hospital, clinical, support areas frequently inspected for visible dirt or fine dust and cleaned immediately with suitable materials.
	Demonstrate appropriate debris transport … covered cart, dedicated elevator, designated route, etc.
	Immediate control of water leakage must be handled in an emergency fashion in occupied areas. Large leaks may necessitate drying. (<72 Hrs.).
	Compliance with coverall clothing when indicated by Class Precaution.
	Tools and equipment damp-wiped prior to entry and exit from sterile and invasive procedure areas.
	Windows, access doors, and debris chutes are closed and secured at the end of each day.
	Areas cleaned and trash disposed at the end of each working day.
	Pest control … No visible signs of birds, insects, rodents or other vermin.
	Compliance with the required Infection Control Activities by Class Precautions.
	Conduct infection control training and education to ensure awareness of construction hazards, infection control deficiencies, and compliance with the required infection control measures.
	Conduct interim life safety measures (ILSM) and green environmental management (GEMS) assessment.

DEPARTMENT OF VETERANS AFFAIRS – BOSTON HEALTHCARE SYSTEM

GREEN ENVIROMENTAL MANAGEMENT SYSTEM (GEMS) DETERMINATION

Project Name:	Project Number:
Construction & Impact Description:	Construction Location: Affected Areas:
Project COTR:	Project Start Date:
Project CPs:	Estimated Duration:
	Completion Date:
Contractor:	
GC Supervisor:	Telephone:
Contractor CP:	

Implementation Checklist:

- ☐ It is determined that the above construction project DOES NOT warrant implementation of the GEMS Program, based on evaluation of the project.
  If the above is checked and completed, stop here, sign below and file in project folder.
- ☐ It is determined that the above construction project DOES warrant implementation of the GEMS Program.
- ☐ Review of construction scope relative to the applicable GEMS administrative actions.
- ☐ Notify Contractor of their responsibilities relative to GEMS.
  Date Meeting was held: _____
  Person/s Present: _____
- ☐ Develop a plan and train both appropriate construction personnel relative to GEMS including a written and signed document attesting to said training.
- ☐ Contractor shall provide weekly inspections and reports on construction site relative to GEMS.
- ☐ Notify the Environmental Manager/GEMS Coordinator relative to any and all deviations from the GEMS administrative actions, spills, releases or events related to VA Waste Management requirements. Modifications, etc. that require actual deviations from the VA Waste Management plan or Storm Water Protection Plan must have the GEMS administrative actions in effect relative to an equivalent environmental protection.
- ☐ Multidisciplinary team has been notified and concurs with plan.
- ☐ Multidisciplinary team will review and document weekly or other intervals as decided by the team.
  Reviews to be done: _____

Signature/Date: _____ _____

Project CPs Environmental Manager/GEMS Coordinator

_____

GC Supervisor / Contractor CP

GREEN ENVIRONMENTAL MANAGEMENT SYSTEM– ADMINISTRATIVE ACTIONS

Applicable Action YES– NO – NA	GEMS Administrative Actions
	Ensuring the Waste Management Specifications remain in effect for the duration of the construction project. Contractor must insure all equipment, materials and products are removed from job site upon the final completion.
	All required DEP and EPA permitting executed, approved and on file.
	Ensuring Storm Water Protection Plan is in full effect and administered in accordance with contract specifications and permitting authority requirements. All construction roll-off containers must be covered at the end of each day or during a rain event.
	Conducting a minimum of one environmental education talk with employees. Topic and attendance should be included in log reports.
	Conduct hazard surveillance of buildings, grounds, and equipment, with special attention to excavation, construction areas, construction storage, roll-off and debris dumpsters, and field offices.
	Notify COTR and GEMS Coordinator if any spills of hazardous materials occur. If a hydraulic leak occurs from construction equipment, do not move the equipment. Remediate spill in place.
	Conducting safety education programs to ensure awareness of any construction hazards, Life Safety Code deficiencies, and these GEMS administrative actions.
	Notify COTR and GEMS Coordinator is any asbestos or suspect asbestos containing material is encountered not previously identified in the scope.
	NEPA checklist complete with requirements defined by the checklist met.

DEPARTMENT OF VETERANS AFFAIRS – BOSTON HEALTHCARE SYSTEM

PATIENT SAFETY PRE-CONSTRUCTION RISK ASSESSMENT

Project Name:	Project Number:
Construction & Impact Description:	Construction Location: Affected Areas:
Project COTR:	Project Start Date:
Project CPs:	Estimated Duration:
	Completion Date:
Contractor:	
GC Supervisor:	Telephone:
Contractor CP:	

Implementation Checklist:

	ITEM	Action Plan
1.	Will this project alter access/egress to/from building/patient care area, either temporarily or Permanently?	
2.	Will visitors/patients have access to this area/walkway/egress? If yes answer: 2a-2d	
2a.	Handicapped accessible	
2b.	Easy to follow	
2c.	Adequate signage for decreased visual acuity	
2d.	no trip hazards	
3.	Will egress/Walkway be an excessive distance to entrance/exit	
4.	Will stairs and walkway remain unobstructed	
5.	Is this a hazardous area that should not be accessible to patients or visitors?	
6.	Are there hazardous chemicals and tools that should not be accessible to patients or visitors?	

Signature/Date: _____ _____

Project CPs Patient Safety

Submittal Process

- Submittal Schedule - needs to be submitted via e-mail
  - identify when submittals will be delivered
  - identify all submittals that will be submitted for review

- Material Approval Submittal Form (Form) - go over what is required on the form
  - Needs to be complete otherwise it will be disapproved
  - Submittal will be disapproved if any items in the submittal are not approved; items disapproved will then need to be resubmitted
  - A separate Form is required for each submittal; do not combine different spec sections on the same Form
  - If a submittal consists of many items, then they should be listed separately on the Form so that they can be approved/disapproved on their own merits; that way only items that have been disapproved need to be resubmitted for approval
  - The Form only allows 11 items to be listed; additional items for the same spec section will require a separate submittal using the same spec section number followed by .1, .2, .3, etc.
  - Ensure all items required to be submitted are detailed and meet requirements of specifications

- Submittal Numbers -
  - Use specification section numbers for submittal numbers
  - If more than one submittal for a spec section then use .1, .2, .3, etc. at end of spec section number
  - Samples - Use .A, .B, .C, etc. at end of spec section number
  - For disapproved submittals, add R1, R2, R3, etc. to the end of the spec section number when resubmitting

- Submittal Process -
  - A/E will create SharePoint/ftp site account for submittals
    - account will have 3 folders, such as: Contractor, A/E Reviewed, VA Reviewed
    - Contractor will have read/write access only for “Contractor” folder; Contractor will have read access for other two folders
  - Contractor to upload submittal to A/E SharePoint/ftp site
    - Separate document for Material Approval Submittal form
    - Separate document(s) for product data
  - Send e-mail to COTR, A/E, CO stating submittal has been uploaded
    - e-mail to contain submittal number and identify items in submittal
    - separate e-mail for each submittal
  - A/E will review, upload to “A/E Reviewed” folder, and send out e-mail (to COTR, CO, Contractor) stating submittal is ready for VA review and whether it has been approved/disapproved by A/E
  - COTR will review, upload to “VA Reviewed” folder, and send out e-mail (to Contractor, A/E, CO) stating submittal has been uploaded and status of submittal (approved or disapproved)
  - Disapproved submittals need to be resubmitted

MATERIAL APPROVAL SUBMITTAL

TO: *(Contracting Officer)*	FROM: *(Contractor)*	DATE
CONTRACT NUMBER	SUBMISSION NUMBER	SUBMITTAL ☐ NEW ☐ RESUBMITTAL
PREVIOUS SUBMISSION NUMBER	PROJECT NUMBER	

TO BE COMPLETED BY CONTRACTOR			FOR GOVERNMENT USE ONLY			
ITEM NO.	SPECIFICATION SECTION/ PARA NO./DRAWING NO.	DESCRIPTION OF MATERIAL *(Include Type, Model Number, Mfg., etc. & file name of attachments)*	AP-PROVED	DISAP-PROVED	SEE REVERSE	INITIAL

BY COMPLETING THIS FORM, THE UNDERSIGNED CONTRACTOR CERTIFIES THAT THE MATERIAL COMPLIES WITH ALL SPECIFICATIONS OF SUBJECT CONTRACT.

DATE	TYPE OR PRINT NAME AND TITLE	SIGNATURE

FOR GOVERNMENT USE ONLY

TO: A-E

For Evaluation and Action

DATE	TYPE OR PRINT NAME AND GRADE	SIGNATURE

TO: VA Engineer/COTR

RECOMMEND	☐ APPROVAL	☐ DISAPPROVAL AS INDICATED ABOVE AND SUBJECT TO ANY APPLICABLE COMMENTS ON THE REVERSE

DATE	TYPE OR PRINT NAME AND GRADE	SIGNATURE

TO: Contracting

☐ APPROVED ☐ DISAPROVED AS INDICATED ABOVE AND SUBJECT TO ANY APPLICABLE COMMENTS ON THE REVERSE SIDE. REQUEST RESUBMITTAL ON DISAPPROVED ITEMS WITHIN _____ DAYS OF DATE SHOWN BELOW.

DATE	TYPE OR PRINT NAME AND GRADE	SIGNATURE

COMMENTS *(Number to correspond with applicable Item Number on reverse)*	

INSTRUCTIONS TO CONTRACTORS

1. The term "material" is defined as articles, supplies, raw materials, equipment, parts, components, and end items that are to be incorporated into the work required by the contract.

2. This form is to be used by contractors for submitting Shop Drawings (.DWG or *.PDF format), Manufacturer's Literature and Certificates (scanned as *.PDF) to the Government for approval in accordance with the provisions of this contract. Unless otherwise specified, it is to be prepared, signed, and E-mailed to the contracting officer with appropriate attachments. One paper format copy is to be submitted also.*

3. Item(s) to be approved will be clearly tabbed or identified. Data pertaining to item(s) to be approved will be clearly identified or tabbed, particularly where documents are voluminous, in order to properly evaluate the materials or articles to be incorporated in the work. Each attachment will be numbered to correspond with the item number shown on the face of this form.

4. Requests submitted shall be numbered consecutively, by contract, in the space entitled "Submission No.". This number, in addition to the Contract No., will be used to identify each Material Approval Submittal. Resubmissions will be indicated in the appropriate block and the insertion of previous submission number and data in addition to a new submission number. A single submission should be used for all work of a section of the specifications, but in NO instance should the submission include work for more than one (1) contract. Submittals requiring priority handling will be submitted by separate submittal using the form and so marked across the face of the form.

5. This Material Approval Submittal is not valid unless it is signed by the contracting officer. This approval is required as called for by the contracting officer under the terms of this contract. One paper copy of the submittal is to be hand signed for Contracting Officers records.

CONFINED SPACE ENTRY PERMIT

Project Name & Location: _____

Entry Date: _____ Start Time: _____ Completion Time: _____

Description of Work to be Performed: _____

Description of Space

Location of confined space: _____ Type of Confined Space: _____

Classification: _____

Entry Check List

Potential Hazard Identified?	☐ YES	☐ NO
Communications Established with Operations Center?	☐ YES	☐ NO
Emergency Proceedures Reviewed?	☐ YES	☐ NO
Entrants and Attendents Trained?	☐ YES	☐ NO
Isolation Of Energy Completed?	☐ YES	☐ NO
Area Secured?	☐ YES	☐ NO
Emergency Escape Retrieval Equipment Available?	☐ YES	☐ NO
Personal Protective Equipment Used?	☐ YES	☐ NO

Confined Space Equipment and PPE Used During Entry

☐ Tripod with Mechanical Winch	☐ Air Purifying Respirator	☐ Gloves
☐ Rescue Tripod with Life Line	☐ Self Contained Breathing Apparatus	☐ Chemical Resistant Clothing
☐ Harness	☐ Steel Toe Boots	☐ Hearing Protection
☐ Two-Way Communication	☐ Hard Hat	☐ Other: _____
☐ General/Local Exhaust Ventilation	☐ Safety Glasses/ Goggles/ Face Shield	☐ Other: _____

Air Monitoring Results Prior to Entry

Monitor Type: _____ Serial Number: _____

Oxygen: _____% LEL: _____% CO: _____% H2S: _____%

Calibration Performed? ☐ YES ☐ NO Alarm Conditions? ☐ YES ☐ NO Days Till Next Calabration: _____

Monitoring Performed By (sign): _____ Date: _____ Time: _____

Continuous Air Monitoring Results

Time: _____ Oxygen: _____% LEL: _____% CO: _____% H2S: _____%

Time: _____ Oxygen: _____% LEL: _____% CO: _____% H2S: _____%

Time: _____ Oxygen: _____% LEL: _____% CO: _____% H2S: _____%

Time: _____ Oxygen: _____% LEL: _____% CO: _____% H2S: _____%

Authorization

We have reviewed the work authorized by this permit and the information contained here-in. Written instructions and safety proceedures have been recieved and understood. Entry can not be approved if any of the squares are marked in the "NO" column. This permit is not valid unless all appropriate items are completed. This permit is to be kept at the job site. Return site copy to supervisor.

Entrants Name _____ Signature _____ Date _____

Attendants Name _____ Signature _____ Date _____

Supervisors Name _____ Signature _____ Date _____

VA MEDICAL CENTER, BROCKTON

HOT WORK PERMIT - DAILY

For Cutting, Welding, Soldering, Brazing With Portable Gas Or Arc Equipment

Contractor to complete gray areas.

Dates:			
Building Number:		**Floor:**	
Department:	Engineering		
Project Name:		**Project #:**	
General Contractor (GC):			
GC Site Supervisor/cell phone:			
Sub-Contractor:			
Work to be done:			
Is Fire Watch required to be performed by Contractor?	Yes	**Permit Expires:**	
The location where this work is to be done has been examined, necessary precautions taken, and permission granted for this work.			
Site Supervisor Signature:			
Site Supervisor Name:			
Time Started:		**Time Finished:**	

ATTENTION

Before any hot work occurs, the Site Supervisor shall inspect the work area and confirm that precautions have been taken to prevent fire in accordance with NFPA 51B.

PRECAUTIONS	Sprinklers in service. Cutting and welding equipment in good repair.
WITHIN 35 FT OF WORK	Floor swept clean of combustibles. Combustible floors wet down, covered with damp sand, metal or other shields. No combustible materials or flammable liquids. Combustibles and flammable liquids protected with covers, guards or metal shields. All wall and floor openings covered. Covers suspended beneath work to collect sparks.
WORK ON WALLS OR CEILINGS **WORK ON ENCLOSED EQUIPMENT (tanks, containers, ducts, etc.)**	Construction noncumbustible and without covering. Combustibles moved away from the opposite side of wall. Equipment cleaned of all combustibles. Containers purges of all flammable vapors.
FIRE WATCH	To be provided during and 30 minutes after operation. Supplied with fire extinguisher and/or small hose. Trained in use of equipment and in sounding the fire alarm.

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 sites of walls) were inspected 30 minutes after the work was completed and were found fire safe. **To be performed on a daily basis for this weekly hot work permit.**

Site Supervisor Signature Name:

Department of
Veterans Affairs

Memorandum

Date:

From: Engineering Service (138 P)

Subj: Contractors working other than normal hours.

To: Chief, Police and Security Service (07)

The following contractors are authorized to work at this Medical Center other than normal hours:

- Contractors: _____

  _____

- Subcontractors: _____

  _____

- Dates: _____
- Time: _____
- Doors to be Opened: _____
- Gates to be Opened: _____
- Location Working: _____
- Type of Work: _____
- Smoke Detectors Shunted: ( ) ( )
  Yes No

Thank you for your assistance in this matter

Project Supervised by:

Name:_____

Ext. _____

Fire Wall/Smoke Barrier Penetration Permit

Project Title & Number: _____

General Contractor (GC)_____

GC Site Supervisor _____

24 Hour Contact number _____

Contractor / Sub-Contractor performing the Work: _____

Location(s) of work (building, floor, wing, room number) _____

_____

Scope of work _____

_____

Approved Firestop Materials used in accordance with Section 07 84 00 FIRESTOPPING:

Fire-stopping _____

Wall board _____

Other _____

_____ _____

GC Project Manager Signature verifying that only approved Firestop Materials are being used — Date

_____

All Fire Wall / Smoke Barrier penetrations shall be repaired/constructed/patched/etc to the appropriate Fire Rating by Close-Of-Business the same day.

Upon completion of work, the Project Engineer or Safety Specialist will visually inspect the area to ensure compliance with requirements prior to closing-up walls/ceilings/etc.

Inspected by _____ Date _____

Contractor/VA staff signature _____

Comments _____

_____

VA Department of Veterans Affairs			
DAILY LOG - FORMAL CONTRACT			**STATION** VAMC Seattle, WA
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:

Barrier installed	☐ YES ☐NO ☐N/A
Isolate HVAC	☐ YES ☐NO ☐N/A
Seal Doors	☐ YES ☐NO ☐N/A
Maintain negative pressure	☐ YES ☐NO ☐N/A
Dust mat at entrance to work area	☐ YES ☐NO ☐N/A
Cover construction waste for transport	☐ YES ☐NO ☐N/A
Wet mop, HEPA vac and inspect prior to barrier removal	☐ YES ☐NO ☐N/A
Remove construction barrier	☐ YES ☐NO ☐N/A
Wet mop and HEPA vacuum	☐ YES ☐NO ☐N/A
Reinstate HVAC	☐ YES ☐NO ☐N/A
Wipe work surfaces with disinfectant	☐ YES ☐NO ☐N/A

Signature of Project Manager

VA Department of Veterans Affairs	
DAILY LOG - SAFETY/ILSM CHECKLIST	**STATION** VAMC Seattle, WA
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**
Note the 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 clear of storage	☐ YES ☐NO ☐N/A
Flammables & 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/tagout in place	☐ YES ☐NO ☐N/A
Extension cords protected/disconnected at end of day.	☐ YES ☐NO ☐N/A
Dust barriers maintained.	☐ YES ☐NO ☐N/A
MSDS maintained on site and products labeled.	☐ YES ☐NO ☐N/A
Asbestos is properly controlled and interstitial doors are closed & 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
HEPA unit in place, functioning, and on E Power	☐ YES ☐NO ☐N/A
Environmental monitoring for mold	☐ YES ☐NO ☐N/A
Inspected by:	

Brockton VA Medical Center
Facilities Management Service
940 Belmont Street
Brockton, MA 02301
(774) 826-1262

REQUEST FOR INFORMATION

No. RFI ##

PROJECT TITLE: XXXXXX

CONTRACT NO. CONTRACT NO.

VA PROJECT NO. XXXXXXXXXX

DATE REQUIRED:

DATE REQUIRED

TO:

FROM:

REQUEST:

REQUESTED BY:

SIGNED:

DATE:

RESPONSE:

☐ This response does not constitute a change to the contract and is not an authorization to the contractor to proceed with any work that modifies the contract price or the time of performance. If the contractor believes that this response modifies any portion of the contract, the contractor shall make a timely notice to the Contracting Officer and await the Contracting Officer's direction before proceeding with any work that the contractor believes is a modification to the contract.

☐ This response may constitute a change to the contract documents. Do not proceed with any work indicated in this response that changes contract documents until directed in writing by the Contracting Officer.

RESPONSE BY:

SIGNED:

DATE:

CONCUR:

SIGNED:

V.A. Project Manager

DATE:

SECTION 01 32 16.17
PROJECT SCHEDULES

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 (VA PROJECT ENGINEER & CONTRACTING OFFICER).

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.

1.3 NOT USED

1.4 COMPUTER PRODUCED SCHEDULES

A. 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: a hard copy listing of all project schedule changes, and the resulting monthly updated schedule in PDF format. These must be submitted with and substantively support the contractor’s monthly payment request and the signed look ahead report.

B. 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 data necessary to produce the computer reports and payment request that is specified.

C. The VA will report errors in computer-produced reports to the Contractor’s representative. The Contractor shall reprocess the computer-produced reports and electronic copies, when requested by the Contracting Officer’s representative, to correct errors which affect the payment and schedule for the project.

1.5 THE INTERIM AND FINAL PROJECT SCHEDULE SUBMITTAL

A. Interim Schedule Submittal: Within 10 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 PDF. 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 and 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 Project Schedule. The Contracting Officer’s separate approval of the interim 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 interim Project Schedule shall reflect the Contractor's approach to scheduling the complete project and shall include at a minimum, the following activities:

1. All phasing described in Section 01 00 00, GENERAL REQUIREMENTS- OPERATIONS AND STORAGE AREAS- Paragraph “Phasing”
2. Procurement- Submittals, review and approvals, fabrication and delivery, of all key and long lead time procurement items.
3. Design- All design submissions listed in the RFP solicitation, including the specified meeting and review activities.
4. Detailed design and construction activities for the first 120 work days after Notice to Proceed.
5. Summary activities which are necessary (and are not included above) to properly show:
   a. The approach to scheduling the remaining work. The work for each major trade must be represented by at least one summary activity, so that the work cumulatively shows the entire project schedule.
   b. Summary activities shall have the trade code of SUM

B. The interim schedule shall describe the activities to be accomplished and their interdependencies. All work activities (including design), other than procurement activities, shall be cost loaded as specified and will be the basis for progress payments during the period prior to

acceptance of the schedule. The interim schedule in its original form shall contain no contract changes or delays which may have been incurred during the interim schedule development period and shall reflect the Contractors schedule as submitted with his RFP solicitation package, or as negotiated prior to Notice to Proceed. All CPM data supporting any time extension requests, in accordance with Article ADJUSTMENT OF CONTRACT COMPLETION, will be derived from the approved final schedule.

C. Final Diagram Submittal: Within 45 calendar days prior to the start of construction, 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 PDF. 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 schedule development period and shall reflect the Contractors as bid schedule. 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.

D. 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.

E. 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 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.

C. 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 and meetings (i.e. dumpster placement meeting, ICRA/ILSM/GEMS/Patient Safety Determination meeting, pre-construction site visits, etc.).
b. Contracting Officer's and Project 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 three (3) weeks 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 VA PROJECT ENGINEER & CONTRACTING OFFICER 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 20 work 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.
4. Anticipated off-hours work based on noise control and adjacent occupied spaces.

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 VA PROJECT ENGINEER & CONTRACTING OFFICER. 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 VA PROJECT ENGINEER & CONTRACTING OFFICER’s approval of the Project Schedule.

D. 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 the AIA application and certificate for payment documents G702 & G703 reflecting updated schedule activities and cost data. 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, generated waste/recycling report, monthly work summary report, updated RFI log, etc.

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, generated waste/recycling report, monthly work summary report, updated RFI log, etc. The VA Project Engineer and Contracting Officer have final approval of percentage complete to be paid for each line item on the contractor’s monthly AIA application.

1.9 PAYMENT AND PROGRESS REPORTING

A. Monthly schedule update meetings will be held on dates mutually agreed to by the VA Project Engineer, Contracting Officer and the Contractor. Contractor shall attend all meetings. The Contractor shall accurately update the Project Schedule and all other data required and provide this information to the VA Project Engineer & Contracting Officer five(5)

work days in advance of the 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 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 resident engineer 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 resident engineer. 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 resident engineer 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 schedule, the VA and the General Contractor 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.
   4. Work weekends, holidays, off-hours, etc.

B. Prior to proceeding with any of the above actions, the Contractor shall notify and obtain approval from the VA Project Engineer & Contracting Officer 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 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 as the direct cause for delaying the project beyond the acceptable limits.
2. Delays in deliveries or work stoppage are encountered which make rescheduling of the work necessary.

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 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 VA PROJECT ENGINEER & CONTRACTING OFFICER 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. 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.

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SECTION 01 33 23
SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

1-1. For the purposes of this contract, samples, test reports, certificates, and manufacturers' literature and data shall also be subject to the previously referenced requirements. The following text refers to all items collectively as SUBMITTALS.

1-2. Submit for approval, all of the items specifically mentioned under the separate sections of the specification, with information sufficient to evidence full compliance with contract requirements. Materials, fabricated articles and the like to be installed in permanent work shall equal those of approved submittals. After an item has been approved, no change in brand or make will be permitted unless:

A. Satisfactory written evidence is presented to, and approved by Contracting Officer, that manufacturer cannot make scheduled delivery of approved item or;
B. Item delivered has been rejected and substitution of a suitable item is an urgent necessity or;
C. Other conditions become apparent which indicates approval of such substitute item to be in best interest of the Government.

1-3. Forward submittals in sufficient time to permit proper consideration and approval action by Government. Time submission to assure adequate lead time for procurement of contract - required items. Delays attributable to untimely and rejected submittals will not serve as a basis for extending contract time for completion. Submittal Forms will be sent electronically and will be digitally signed by the contractor using a PDF writer program; such as Adobe Reader/Writer or Pro V Nuance, etc. Supporting Data, such as cut-sheets, etc., shall be scanned and emailed with each submittal.

1-4. Submittals will be reviewed for compliance with contract requirements by VA Project Engineer on behalf of the Contracting Officer.

1-5. The general contractor shall comply with the submittal process defined in item 1-13 ‘Submittal Process’. Contractor shall sequentially number the electronic submittal by division. The Contractor, in any subsequent correspondence, shall refer to this file and identification number to expedite replies relative to previously approved or disapproved submittals.

1-6. The Government reserves the right to require additional submittals, whether or not particularly mentioned in this contract.

1-7. Schedules called for in specifications and shown on shop drawings shall be submitted for use and information of Department of Veterans Affairs. However, the Contractor shall assume responsibility for coordinating and verifying schedules. The VA assumes no responsibility for checking schedules or layout drawings for exact sizes, exact numbers and detailed positioning of items.

1-8. If the Contractor is unable to scan large file submittals electronically, upon Contracting Officer Approval, the submittals may be shipped by the contractor prepaid. Contracting Officer assumes no responsibility for checking quantities or exact numbers included in such submittals.

A. Submit physical samples required in quadruplicate. Submit shop drawings, schedules, manufacturers' literature and data, and certificates in quadruplicate, except where a greater number is specified.

B. Submittals will receive consideration only when sent via electronic method signed by Contractor. The contractor must have a PDF writer program to electronically sign material submittals. Submittals other than material submittals, such as Shop Drawings, Coordination of Trade Drawings, etc., shall be sent via first class mail and shall contain the list of items, name of Medical Center, name of Contractor, contract number, applicable specification paragraph numbers, applicable drawing numbers (and other information required for exact identification of location for each item), manufacturer and brand, ASTM or Federal Specification Number (if any) and such additional information as may be required by specifications for particular item being furnished. In addition, catalogs shall be marked to indicate specific items submitted for approval (i.e. circle, cloud, etc. the specific product).
   1. A copy of letter must be enclosed with items, and any items received without identification letter will be considered "unclaimed goods" and held for a limited time only.
   2. Each sample, certificate, manufacturers' literature and data shall be labeled to indicate the name and location of the Medical Center, name of Contractor, manufacturer, brand, contract number and ASTM or Federal Specification Number as applicable and location(s) on project.
   3. Required certificates shall be signed by an authorized representative of manufacturer or supplier of material, and by Contractor.

C. In addition to complying with the applicable requirements specified in preceding Article 1.9, samples which are required to have Laboratory Tests (those preceded by symbol "LT" under the separate sections of the

specification shall be tested, at the expense of Contractor, in a commercial laboratory approved by Contracting Officer.

1. Laboratory shall furnish Contracting Officer with a certificate stating that it is fully equipped and qualified to perform intended work, is fully acquainted with specification requirements and intended use of materials and is an independent establishment in no way connected with organization of Contractor or with manufacturer or supplier of materials to be tested.
2. Certificates shall also set forth a list of comparable projects upon which laboratory have performed similar functions during past five years.
3. Samples and laboratory tests shall be sent directly to approved commercial testing laboratory.
4. Contractor shall send a copy of transmittal letter to both VA Project Engineer and Contracting Officer simultaneously with submission of material to a commercial testing laboratory.
5. Laboratory test reports shall be sent directly to VA Project Engineer and Contracting Officer for appropriate action.
6. Laboratory reports shall list contract specification test requirements and a comparative list of the laboratory test results. When tests show that the material meets specification requirements, the laboratory shall so certify on test report.
7. Laboratory test reports shall also include a recommendation for approval or disapproval of tested item.

D. If electronic submittals or samples have been disapproved, resubmit new electronic submittal or samples within five (5) working days after notification of disapproval. Such new samples shall be marked "Resubmitted Sample" in addition to containing other previously specified information required on label and in transmittal letter.

E. Approved samples will be retained by the VA Project Engineer at the site as VA Project Engineer property. Samples that are not approved will be retained by the VA.

F. Submittal drawings (shop, erection or setting drawings) and schedules, required for work of various trades, shall be checked before submission by technically qualified employees of Contractor for accuracy, completeness and compliance with contract requirements. These drawings and schedules shall be stamped and signed by Contractor certifying to such check.

1. For each drawing required, submit one legible photographic paper or vellum reproducible.
2. Reproducible shall be full size.

3. Each drawing shall have marked thereon, proper descriptive title, including Medical Center location, project number, manufacturer's number, reference to contract drawing number, detail Section Number, and Specification Section Number.
4. A space 120 mm by 125 mm (4-3/4 by 5 inches) shall be reserved on each drawing to accommodate approval or disapproval stamp.
5. Submit drawings, ROLLED WITHIN A MAILING TUBE, fully protected for shipment.
6. One reproducible print of approved or disapproved shop drawings will be forwarded to Contractor.
7. When work is directly related and involves more than one trade, shop drawings shall be submitted to Architect-Engineer under one cover.

1-9. Material samples, shop drawings, test reports, certificates and manufacturers' literature and data, shall be submitted for approval to

Neel Patel, Project Engineer
U.S. Department of Veterans Affairs
VHA BHS Brockton VA Medical Center
940 Belmont Street, Building 1 (138P)
Brockton, MA 02301

1-10. At the time of transmittal to the Project Engineer, the Contractor shall also send a copy of the complete material submittal sample to the VA Interior Designer (if applicable). Request shipping address from VA Project Engineer.

1-11. Not Included

1-12. Submittal Process

- Submittal Schedule - needs to be submitted via e-mail
  - identify when submittals will be delivered
  - identify all submittals that will be submitted for review

- Material Approval Submittal Form (Form) - go over what is required on the form
  - Needs to be complete otherwise it will be disapproved
  - Submittal will be disapproved if any items in the submittal are not approved; items disapproved will then need to be resubmitted
  - A separate Form is required for each submittal; do not combine different spec sections on the same Form
  - If a submittal consists of many items, then they should be listed separately on the Form so that they can be approved/disapproved on their own merits; that way only items that have been disapproved need to be resubmitted for approval
  - The Form only allows 11 items to be listed; additional items for the same spec section will require a separate submittal using the same spec section number followed by .1, .2, .3, etc.

- Ensure all items required to be submitted are detailed and meet requirements of specifications

- Submittal Numbers -
  - Use specification section numbers for submittal numbers
  - If more than one submittal for a spec section then use .1, .2, .3, etc. at end of spec section number
  - Samples - Use .A, .B, .C, etc. at end of spec section number
  - For disapproved submittals, add R1, R2, R3, etc. to the end of the spec section number when resubmitting

- Submittal Process -
  - A/E will create SharePoint/ftp site account for submittals
    - account will have 3 folders, such as: Contractor, A/E Reviewed, VA Reviewed
    - Contractor will have read/write access only for “Contractor” folder; Contractor will have read access for other two folders
  - Contractor to upload submittal to A/E SharePoint/ftp site
    - Separate document for Material Approval Submittal form
    - Separate document(s) for product data
  - Send e-mail to COTR, A/E, CO stating submittal has been uploaded
    - e-mail to contain submittal number and identify items in submittal
    - separate e-mail for each submittal
  - A/E will review, upload to “A/E Reviewed” folder, and send out e-mail (to COTR, CO, Contractor) stating submittal is ready for VA review and whether it has been approved/disapproved by A/E
  - COTR will review, upload to “VA Reviewed” folder, and send out e-mail (to Contractor, A/E, CO) stating submittal has been uploaded and status of submittal (approved or disapproved)
  - Disapproved submittals need to be resubmitted

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SECTION 01 35 26
SAFETY REQUIREMENTS

TABLE OF CONTENTS

SECTION 01 35 26
SAFETY REQUIREMENTS

1.1 APPLICABLE PUBLICATIONS:

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

B. American Society of Safety Engineers (ASSE):

A10.1-2011.....Pre-Project & Pre-Task Safety and Health Planning

A10.34-2012.....Protection of the Public on or Adjacent to Construction Sites

A10.38-2013.....Basic Elements of an Employer’s Program to Provide a Safe and Healthful Work Environment American National Standard Construction and Demolition Operations

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

E84-2013.....Surface Burning Characteristics of Building Materials

D. The Facilities Guidelines Institute (FGI):

FGI Guidelines-2010Guidelines for Design and Construction of Healthcare Facilities

E. National Fire Protection Association (NFPA):

10-2013.....Standard for Portable Fire Extinguishers

30-2012.....Flammable and Combustible Liquids Code

51B-2014.....Standard for Fire Prevention During Welding, Cutting and Other Hot Work

70-2014.....National Electrical Code

70B-2013.....Recommended Practice for Electrical Equipment Maintenance

70E-2012 .....Standard for Electrical Safety in the Workplace

99-2012.....Health Care Facilities Code

241-2013.....Standard for Safeguarding Construction, Alteration, and Demolition Operations

F. The Joint Commission (TJC)

TJC Manual .....Comprehensive Accreditation and Certification Manual

G. U.S. Nuclear Regulatory Commission

10 CFR 20 .....Standards for Protection Against Radiation

H. U.S. Occupational Safety and Health Administration (OSHA):

29 CFR 1904 .....Reporting and Recording Injuries & Illnesses

29 CFR 1910 .....Safety and Health Regulations for General Industry

29 CFR 1926 .....Safety and Health Regulations for Construction Industry

CPL 2-0.124.....Multi-Employer Citation Policy

I. VHA Directive 2005-007

1.2 DEFINITIONS:

A. OSHA “Competent Person” (CP). One who is capable of identifying existing and predictable hazards in the surroundings and working conditions which are unsanitary, hazardous or dangerous to employees, and who has the authorization to take prompt corrective measures to eliminate them (see 29 CFR 1926.32(f)).

B. "Qualified Person" means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated his ability to

solve or resolve problems relating to the subject matter, the work, or the project.

C. High Visibility Accident. Any mishap which may generate publicity or high visibility.

D. Medical Treatment. Treatment administered by a physician or by registered professional personnel under the standing orders of a physician. Medical treatment does not include first aid treatment even through provided by a physician or registered personnel.

E. Recordable Injuries or Illnesses. Any work-related injury or illness that results in:

1. Death, regardless of the time between the injury and death, or the length of the illness;

2. Days away from work (any time lost after day of injury/illness onset);

3. Restricted work;

4. Transfer to another job;

5. Medical treatment beyond first aid;

6. Loss of consciousness; or

7. A significant injury or illness diagnosed by a physician or other licensed health care professional, even if it did not result in (1) through (6) above.

1.3 REGULATORY REQUIREMENTS:

A. In addition to the detailed requirements included in the provisions of this contract, comply with 29 CFR 1926, comply with 29 CFR 1910 as incorporated by reference within 29 CFR 1926, comply with ASSE A10.34, and all applicable federal, state, and local laws, ordinances, criteria, rules and regulations. Submit matters of interpretation of standards for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent

requirements govern except with specific approval and acceptance by the Contracting Officer.

1.4 ACCIDENT PREVENTION PLAN (APP):

A. The APP (aka Construction Safety & Health Plan) shall interface with the Contractor's overall safety and health program. Include any portions of the Contractor's overall safety and health program referenced in the APP in the applicable APP element and ensure it is site-specific. The Government considers the Prime Contractor to be the "controlling authority" for all worksite safety and health of each subcontractor(s). Contractors are responsible for informing their subcontractors of the safety provisions under the terms of the contract and the penalties for noncompliance, coordinating the work to prevent one craft from interfering with or creating hazardous working conditions for other crafts, and inspecting subcontractor operations to ensure that accident prevention responsibilities are being carried out.

B. The APP shall be prepared as follows:

1. Written in English by a qualified person who is employed by the Prime Contractor articulating the specific work and hazards pertaining to the contract (model language can be found in ASSE A10.33). Specifically articulating the safety requirements found within these VA contract safety specifications.

2. Address both the Prime Contractors and the subcontractors work operations.

3. State measures to be taken to control hazards associated with materials, services, or equipment provided by suppliers.

4. Address all the elements/sub-elements and in order as follows:

a. **SIGNATURE SHEET.** Title, signature, and phone number of the following:

1) Plan preparer (Qualified Person such as corporate safety staff person or contracted Certified Safety Professional with construction safety experience);

2) Plan approver (company/corporate officers authorized to obligate the company);

3) Plan concurrence (e.g., Chief of Operations, Corporate Chief of Safety, Corporate Industrial Hygienist, project manager or superintendent, project safety professional). Provide concurrence of other applicable corporate and project personnel (Contractor).

b. **BACKGROUND INFORMATION**. List the following:

1) Contractor;

2) Contract number;

3) Project name;

4) Brief project description, description of work to be performed, and location; phases of work anticipated (these will require an AHA).

c. **STATEMENT OF SAFETY AND HEALTH POLICY**. Provide a copy of current corporate/company Safety and Health Policy Statement, detailing commitment to providing a safe and healthful workplace for all employees. The Contractor’s written safety program goals, objectives, and accident experience goals for this contract should be provided.

d. **RESPONSIBILITIES AND LINES OF AUTHORITIES**. Provide the following:

1) A statement of the employer’s ultimate responsibility for the implementation of his SOH program;

2) Identification and accountability of personnel responsible for safety at both corporate and project level. Contracts specifically requiring safety or industrial hygiene personnel shall include a copy of their resumes.

3) The names of Competent and/or Qualified Person(s) and proof of competency/qualification to meet specific OSHA Competent/Qualified Person(s) requirements must be attached.;

4) Requirements that no work shall be performed unless a designated competent person is present on the job site;

5) Requirements for pre-task Activity Hazard Analysis (AHAs);

6) Lines of authority;

7) Policies and procedures regarding noncompliance with safety requirements (to include disciplinary actions for violation of safety requirements) should be identified;

e. SUBCONTRACTORS AND SUPPLIERS. If applicable, provide procedures for coordinating SOH activities with other employers on the job site:

1) Identification of subcontractors and suppliers (if known);

2) Safety responsibilities of subcontractors and suppliers.

f. **TRAINING.**

1) Site-specific SOH orientation training at the time of initial hire or assignment to the project for every employee before working on the project site is required.

2) Mandatory training and certifications that are applicable to this project (e.g., explosive actuated tools, electrical lockout/NFPA 70E, machine/equipment lockout, confined space, fire alarm certificates, plumbing license, electrical license, 30-hour OSHA certifications, ASHE CHC certified healthcare constructor for site superintendent, etc…) and any requirements for periodic retraining/recertification are required.

3) Procedures for ongoing safety and health training for supervisors and employees shall be established to address changes in site hazards/conditions.

4) OSHA 30-hour training is required for all workers on site and the Trade Competent Persons (CPs). 10-hour OSHA is not acceptable.

g. SAFETY AND HEALTH INSPECTIONS.

1) Specific assignment of responsibilities for a minimum daily job site safety and health inspection during periods of work activity: Who will conduct (e.g., “Site Safety and Health

CP"), proof of inspector's training/qualifications, when inspections will be conducted, procedures for documentation, deficiency tracking system, and follow-up procedures.

2) Any external inspections/certifications that may be required (e.g., contracted CSP or CSHT)

h. **ACCIDENT INVESTIGATION & REPORTING.** The Contractor shall conduct mishap investigations of all OSHA Recordable Incidents. The APP shall include accident/incident investigation procedure & identify person(s) responsible to provide the following to the Contracting Officer Representative, Contracting Officer and VA Safety Office (Safety Officer, Manager Specialist):

1) Exposure data (man-hours worked);

2) Accident investigations, reports, and logs.

i. **PLANS (PROGRAMS, PROCEDURES) REQUIRED.** Based on a risk assessment of contracted activities and on mandatory OSHA compliance programs, the Contractor shall address all applicable occupational risks in site-specific compliance and accident prevention plans. These Plans shall include but are not be limited to procedures for addressing the risks associates with the following:

1) Emergency response;

2) Contingency for severe weather;

3) Fire Prevention;

4) Medical Support;

5) Posting of emergency telephone numbers;

6) Prevention of alcohol and drug abuse;

7) Site sanitation (housekeeping, drinking water, toilets);

8) Night operations and lighting;

9) Hazard communication program;

10) Welding/Cutting “Hot” work;

11) Electrical Safe Work Practices (Electrical LOTO/NFPA 70E);

12) General Electrical Safety

13) Hazardous energy control (Machine LOTO);

14) Site-Specific Fall Protection & Prevention;

15) Excavation/trenching;

16) Asbestos abatement;

17) Lead abatement;

18) Crane Critical lift;

19) Respiratory protection;

20) Health hazard control program;

21) Radiation Safety Program;

22) Abrasive blasting;

23) Heat/Cold Stress Monitoring;

24) Crystalline Silica Monitoring (Assessment);

25) Demolition plan (to include engineering survey);

26) Formwork and shoring erection and removal;

27) PreCast Concrete.

C. Submit the APP to the Contracting Officer Representative, Contracting Officer and VA Safety Office for review for compliance with contract requirements in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES 30 calendar days prior to the date of the preconstruction conference for acceptance. Work cannot proceed without an accepted APP.

D. Once accepted by the Contracting Officer Representative, Contracting Officer and VA Safety Office, the APP and attachments will be enforced as part of the contract. Disregarding the provisions of this contract

or the accepted APP will be cause for stopping of work, at the discretion of the Contracting Officer, until the matter has been rectified.

E. Once work begins, changes to the accepted APP shall be made with the knowledge and concurrence of the Contracting Officer Representative, Contracting Officer and VA Safety Office. Should any severe hazard exposure, i.e. imminent danger, become evident, stop work in the area, secure the area, and develop a plan to remove the exposure and control the hazard. Notify the Contracting Officer within 24 hours of discovery. Eliminate/remove the hazard. In the interim, take all necessary action to restore and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public (as defined by ASSE/SAFE A10.34) and the environment.

1.5 ACTIVITY HAZARD ANALYSES (AHAS):

A. AHAs are also known as Job Hazard Analyses, Job Safety Analyses, and Activity Safety Analyses. Before beginning each work activity involving a type of work presenting hazards not experienced in previous project operations or where a new work crew or sub-contractor is to perform the work, the Contractor(s) performing that work activity shall prepare an AHA (Example electronic AHA forms can be found on the US Army Corps of Engineers web site)

B. AHAs shall define the activities being performed and identify the work sequences, the specific anticipated hazards, site conditions, equipment, materials, and the control measures to be implemented to eliminate or reduce each hazard to an acceptable level of risk.

C. Work shall not begin until the AHA for the work activity has been accepted by the Contracting Officer Representative, Contracting Officer and VA Safety Office and discussed with all engaged in the activity, including the Contractor, subcontractor(s), and Government on-site representatives at preparatory and initial control phase meetings.

1. The names of the Competent/Qualified Person(s) required for a particular activity (for example, excavations, scaffolding, fall protection, other activities as specified by OSHA and/or other State and Local agencies) shall be identified and included in the AHA. Certification of their competency/qualification shall be submitted

to the Government Designated Authority (GDA) for acceptance prior to the start of that work activity.

2. The AHA shall be reviewed and modified as necessary to address changing site conditions, operations, or change of competent/qualified person(s).

   a. If more than one Competent/Qualified Person is used on the AHA activity, a list of names shall be submitted as an attachment to the AHA. Those listed must be Competent/Qualified for the type of work involved in the AHA and familiar with current site safety issues.

   b. If a new Competent/Qualified Person (not on the original list) is added, the list shall be updated (an administrative action not requiring an updated AHA). The new person shall acknowledge in writing that he or she has reviewed the AHA and is familiar with current site safety issues.

3. Submit AHAs to the Contracting Officer Representative, Contracting Officer and VA Safety Office for review for compliance with contract requirements in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES for review at least 30 calendar days prior to the start of each phase. Subsequent AHAs as shall be formatted as amendments to the APP. The analysis should be used during daily inspections to ensure the implementation and effectiveness of the activity's safety and health controls.

4. The AHA list will be reviewed periodically (at least monthly) at the Contractor supervisory safety meeting and updated as necessary when procedures, scheduling, or hazards change.

5. Develop the activity hazard analyses using the project schedule as the basis for the activities performed. All activities listed on the project schedule will require an AHA. The AHAs will be developed by the contractor, supplier, or subcontractor and provided to the prime contractor for review and approval and then submitted to the Contracting Officer Representative, Contracting Officer and VA Safety Office.

1.6 PRECONSTRUCTION CONFERENCE:

A. Contractor representatives who have a responsibility or significant role in implementation of the accident prevention program, as required by 29 CFR 1926.20(b)(1), on the project shall attend the preconstruction conference to gain a mutual understanding of its implementation. This includes the project superintendent, subcontractor superintendents, and any other assigned safety and health professionals.

B. Discuss the details of the submitted APP to include incorporated plans, programs, procedures and a listing of anticipated AHAs that will be developed and implemented during the performance of the contract. This list of proposed AHAs will be reviewed at the conference and an agreement will be reached between the Contractor and the Contracting Officer's representative as to which phases will require an analysis. In addition, establish a schedule for the preparation, submittal, review, and acceptance of AHAs to preclude project delays.

C. Deficiencies in the submitted APP will be brought to the attention of the Contractor within 21 days of submittal, and the Contractor shall revise the plan to correct deficiencies and re-submit it for acceptance. Do not begin work until there is an accepted APP.

1.7 “SITE SAFETY AND HEALTH OFFICER” (SSHO) AND “COMPETENT PERSON” (CP):

A. The Prime Contractor shall designate a minimum of one SSHO at each project site that will be identified as the SSHO to administer the Contractor's safety program and government-accepted Accident Prevention Plan. Each subcontractor shall designate a minimum of one CP in compliance with 29 CFR 1926.20 (b)(2) that will be identified as a CP to administer their individual safety programs.

B. Further, all specialized Competent Persons for the work crews will be supplied by the respective contractor as required by 29 CFR 1926 (i.e. Asbestos, Electrical, Cranes, & Derricks, Demolition, Fall Protection, Fire Safety/Life Safety, Ladder, Rigging, Scaffolds, and Trenches/Excavations).

C. These Competent Persons can have collateral duties as the subcontractor’s superintendent and/or work crew lead persons as well as fill more than one specialized CP role (i.e. Asbestos, Electrical, Cranes, & Derricks, Demolition, Fall Protection, Fire Safety/Life Safety, Ladder, Rigging, Scaffolds, and Trenches/Excavations).

D. The SSHO or an equally-qualified Designated Representative/alternate will maintain a presence on the site during construction operations. CPs will maintain presence during their construction activities in accordance with above mentioned clause. A listing of the designated SSHO and all known CPs shall be submitted prior to the start of work as part of the APP with the training documentation and/or AHA as listed in Section 1.8 below.

E. The repeated presence of uncontrolled hazards during a contractor’s work operations will result in the designated CP as being deemed incompetent and result in the required removal of the employee.

1.8 TRAINING:

A. The designated Prime Contractor SSHO must meet the requirements of all applicable OSHA standards and be capable (through training, experience, and qualifications) of ensuring that the requirements of 29 CFR 1926.16 and other appropriate Federal, State and local requirements are met for the project. As a minimum the SSHO must have completed the OSHA 30-hour Construction Safety class and have five (5) years of construction industry safety experience or three (3) years if he/she possesses a Certified Safety Professional (CSP) or certified Construction Safety and Health Technician (CSHT) certification or have a safety and health degree from an accredited university or college.

B. All designated CPs shall have completed the OSHA 30-hour Construction Safety course within the past 5 years.

C. In addition to the OSHA 30 Hour Construction Safety Course, all CPs with high hazard work operations such as operations involving asbestos, electrical, cranes, demolition, work at heights/fall protection, fire safety/life safety, ladder, rigging, scaffolds, and trenches/excavations shall have a specialized formal course in the hazard recognition & control associated with those high hazard work

operations. Documented “repeat” deficiencies in the execution of safety requirements will require retaking the requisite formal course.

D. All other construction workers shall have the OSHA 30-hour Construction Safety course and any necessary safety training to be able to identify hazards within their work environment.

E. Submit training records associated with the above training requirements to the Contracting Officer Representative, Contracting Officer and VA Safety Office for review for compliance with contract requirements in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES 30 calendar days prior to the date of the preconstruction conference for acceptance.

F. Prior to any worker for the contractor or subcontractors beginning work, they shall undergo a safety briefing provided by the SSHO or his/her designated representative. As a minimum, this briefing shall include information on the site-specific hazards, construction limits, VAMC safety guidelines, means of egress, break areas, work hours, locations of restrooms, use of VAMC equipment, emergency procedures, accident reporting etc... Documentation shall be provided to the Resident Engineer that individuals have undergone contractor’s safety briefing.

G. Ongoing safety training will be accomplished in the form of weekly documented safety meeting.

H. Site Superintendent shall be certified by American Society of Healthcare Engineers (ASHE CHC Certified Healthcare Constructor). Working in a health care facility is different from working in any other environment, it is critical for anyone involved in a project at a VA medical center to have a detailed understanding of the health care setting for renovation and construction projects carried out in or near patient care areas.

1.9 INSPECTIONS:

A. The SSHO shall conduct frequent and regular safety inspections (daily) of the site and each of the subcontractors CPs shall conduct frequent and regular safety inspections (daily) of the their work operations as required by 29 CFR 1926.20(b)(2). Each week, the SSHO shall conduct a

formal documented inspection of the entire construction areas with the subcontractors' "Trade Safety and Health CPs" present in their work areas. Coordinate with, and report findings and corrective actions weekly to Contracting Officer Representative, Contracting Officer and VA Safety Office.

B. A Certified Safety Professional (CSP) with specialized knowledge in construction safety or a certified Construction Safety and Health Technician (CSHT) shall randomly conduct a monthly site safety inspection. The CSP or CSHT can be a corporate safety professional or independently contracted. The CSP or CSHT will provide their certificate number on the required report for verification as necessary. The general contractor shall bear the cost to acquire the CSP and perform the required monthly site safety inspections. These inspection reports shall be provided to the Contracting Officer Representative, Contracting Officer and VA Safety Office within 3 days of inspection.

1. Results of the inspection will be documented with tracking of the identified hazards to abatement.

2. The Contracting Officer Representative, Contracting Officer and VA Safety Office will be notified immediately prior to start of the inspection and invited to accompany the inspection.

3. Identified hazard and controls will be discussed to come to a mutual understanding to ensure abatement and prevent future reoccurrence.

4. A report of the inspection findings with status of abatement will be provided to the Contracting Officer Representative, Contracting Officer and VA Safety Office within 3 days of the onsite inspection.

1.10 ACCIDENTS, OSHA 300 LOGS, AND MAN-HOURS:

A. Notify the Contracting Officer Representative, Contracting Officer and VA Safety Office as soon as practical, but no more than four hours after any accident meeting the definition of OSHA Recordable Injuries or Illnesses or High Visibility Accidents, property damage equal to or greater than $5,000, or any weight handling equipment accident. Within notification include contractor name; contract title; type of contract; name of activity, installation or location where accident occurred;

date and time of accident; names of personnel injured; extent of property damage, if any; extent of injury, if known, and brief description of accident (to include type of construction equipment used, PPE used, etc.). Preserve the conditions and evidence on the accident site until the Contracting Officer Representative, Contracting Officer and VA Safety Office determine whether a government investigation will be conducted.

B. Conduct an accident investigation for recordable injuries and illnesses, for Medical Treatment defined in paragraph DEFINITIONS, and property damage accidents resulting in at least $20,000 in damages, to establish the root cause(s) of the accident. Complete the VA Form 2162, and provide the report to the Contracting Officer Representative, Contracting Officer and VA Safety Office within 5 calendar days of the accident. The Contracting Officer Representative, Contracting Officer and VA Safety Office will provide copies of any required or special forms.

C. A summation of all man-hours worked by the contractor and associated sub-contractors for each month will be reported to the Contracting Officer Representative, Contracting Officer and VA Safety Office monthly.

D. A summation of all OSHA recordable accidents experienced on site by the contractor and associated sub-contractors for each month will be provided to the Contracting Officer Representative, Contracting Officer and VA Safety Office monthly. The contractor and associated sub-contractors’ OSHA 300 logs will be made available to the Contracting Officer Representative, Contracting Officer and VA Safety Office as requested.

1.11 PERSONAL PROTECTIVE EQUIPMENT (PPE):

A. PPE is governed in all areas by the nature of the work the employee is performing. For example, specific PPE required for performing work on electrical equipment is identified in NFPA 70E, Standard for Electrical Safety in the Workplace.

B. Mandatory PPE includes:

1. Hard Hats – unless written authorization is given by the Contracting Officer Representative, Contracting Officer and VA Safety Office in circumstances of work operations that have limited potential for falling object hazards such as during finishing work or minor remodeling. With authorization to relax the requirement of hard hats, if a worker becomes exposed to an overhead falling object hazard, then hard hats would be required in accordance with the OSHA regulations.

2. Safety glasses - unless written authorization is given by the Contracting Officer Representative, Contracting Officer and VA Safety Office appropriate safety glasses meeting the ANSI Z.87.1 standard must be worn by each person on site.

3. Appropriate Safety Shoes – based on the hazards present, safety shoes meeting the requirements of ASTM F2413-11 shall be worn by each person on site unless written authorization is given by the Contracting Officer Representative, Contracting Officer and VA Safety Office.

4. Hearing protection - Use personal hearing protection at all times in designated noise hazardous areas or when performing noise hazardous tasks.

1.12 INFECTION CONTROL

A. Infection Control is critical in all medical center facilities. Interior construction activities causing disturbance of existing dust, or creating new dust, must be conducted within ventilation-controlled areas that minimize the flow of airborne particles into patient areas. Exterior construction activities causing disturbance of soil or creates dust in some other manner must be

B. An AHA associated with infection control will be performed by VA personnel in accordance with FGI Guidelines (i.e. Infection Control Risk Assessment (ICRA)). The ICRA procedure found on the American Society for Healthcare Engineering (ASHE) website will be utilized. Risk classifications of Class II or lower will require approval by the Contracting Officer Representative, Contracting Officer and VA Safety Office before beginning any construction work. Risk classifications of Class III or higher will require a permit before beginning any

construction work. Infection Control permits will be issued by the Contracting Officer Representative, Contracting Officer and VA Infection Control Practitioner. The Infection Control Permits will be posted outside the appropriate construction area. More than one permit may be issued for a construction project if the work is located in separate areas requiring separate classes. The required infection control precautions with each class are as follows:

1. Analyze each site & room prior to construction commencement to determine the effects of blocking HVAC ducts and their impact on existing air handling systems that must remain operational before initiating a dust control program. The method of capping ducts shall be dust tight and withstand airflow.

2. Construct anteroom to maintain negative airflow from clean area through anteroom and into work area where required.

3. High risk patient care areas require additional measures like air locks, special signage, and smoke and negative pressure alarms. The general contractor shall bear the costs for such additional measures.

4. Work with Medical Center personnel to achieve desired level of isolation suited to the scope of risk involved.

1. Class I requirements:

a. During Construction Work:

1) Notify the Contracting Officer Representative, Contracting Officer and VA Safety Office & Infection Control Practitioner.

2)Execute work by methods to minimize raising dust from construction operations.

3) Ceiling tiles: Immediately replace a ceiling tiles displaced for visual inspection.

b. Upon Completion:

1) Clean work area upon completion of task

2) Notify the Contracting Officer Representative, Contracting Officer and VA Safety Office & Infection Control Practitioner.

2. Class II requirements:

a. During Construction Work:

1) Notify the Contracting Officer Representative, Contracting Officer and VA Safety Office & Infection Control Practitioner.

2) Provide active means to prevent airborne dust from dispersing into atmosphere such as wet methods or tool mounted dust collectors where possible.

3) Water mist work surfaces to control dust while cutting.

4) Seal unused doors with duct tape.

5) Block off and seal air vents.

6) Remove or isolate HVAC system in areas where work is being performed.

b. Upon Completion:

1) Wipe work surfaces with cleaner/disinfectant.

2) Contain construction waste before transport in tightly covered containers.

3) Wet mop and/or vacuum with HEPA filtered vacuum before leaving work area.

4) Upon completion, restore HVAC system where work was performed

5) Notify the Contracting Officer Representative, Contracting Officer and VA Safety Office & Infection Control Practitioner.

3. Class III requirements:

a. During Construction Work:

1) Obtain permit from the Contracting Officer Representative, Contracting Officer and VA Safety Office & Infection Control Practitioner.

2) Remove or Isolate HVAC system in area where work is being done to prevent contamination of duct system.

3) Complete all critical barriers i.e. sheetrock, plywood, plastic, to seal area from non work area or implement control cube method (cart with plastic covering and sealed connection

to work site with HEPA vacuum for vacuuming prior to exit) before construction begins. Install construction barriers and ceiling protection carefully, outside of normal work hours.

4) Maintain negative air pressure, 0.01 inches of water gauge, within work site utilizing HEPA equipped air filtration units and continuously monitored with a digital display, recording and alarm instrument, which must be calibrated on installation, maintained with periodic calibration and monitored by the contractor.

5) Contain construction waste before transport in tightly covered containers.

6) Cover transport receptacles or carts. Tape covering unless solid lid.

b. Upon Completion:

1) Do not remove barriers from work area until completed project is inspected by the Contracting Officer Representative, Contracting Officer and VA Safety Office & Infection Control Practitioner. and thoroughly cleaned by the VA Environmental Services Department.

2) Remove construction barriers and ceiling protection carefully to minimize spreading of dirt and debris associated with construction, outside of normal work hours.

3) Vacuum work area with HEPA filtered vacuums.

4) Wet mop area with cleaner/disinfectant.

5) Upon completion, restore HVAC system where work was performed.

6) Return permit to the Contracting Officer Representative, Contracting Officer and VA Safety Office & Infection Control Practitioner.

4. Class IV requirements:

a. During Construction Work:

1) Obtain permit from the Contracting Officer Representative, Contracting Officer and VA Safety Office & Infection Control Practitioner.

2) Isolate HVAC system in area where work is being done to prevent contamination of duct system.

3) Complete all critical barriers i.e. sheetrock, plywood, plastic, to seal area from non work area or implement control cube method (cart with plastic covering and sealed connection to work site with HEPA vacuum for vacuuming prior to exit) before construction begins. Install construction barriers and ceiling protection carefully, outside of normal work hours.

4) Maintain negative air pressure within work site utilizing HEPA equipped air filtration units.

5) Seal holes, pipes, conduits, and punctures.

6) Construct anteroom and require all personnel to pass through this room so they can be vacuumed using a HEPA vacuum cleaner before leaving work site or they can wear cloth or paper coveralls that are removed each time they leave work site.

7) All personnel entering work site are required to wear shoe covers. Shoe covers must be changed each time the worker exits the work area.

b. Upon Completion:

1) Do not remove barriers from work area until completed project is inspected by the Contracting Officer Representative, Contracting Officer and VA Safety Office & Infection Control Practitioner. with thorough cleaning by the VA Environmental Services Dept.

2) Remove construction barriers and ceiling protection carefully to minimize spreading of dirt and debris associated with construction, outside of normal work hours.

3) Contain construction waste before transport in tightly covered containers.

4) Cover transport receptacles or carts. Tape covering unless solid lid.

5) Vacuum work area with HEPA filtered vacuums.

6) Wet mop area with cleaner/disinfectant.

7) Upon completion, restore HVAC system where work was performed.

8) Return permit to the Contracting Officer Representative, Contracting Officer and VA Safety Office & Infection Control Practitioner.

C. Barriers shall be erected as required based upon classification (Class III & IV requires barriers) and shall be constructed as follows:

1. Class III and IV - closed door with masking tape applied over the frame and door is acceptable for projects that can be contained in a single room.

2. Construction, demolition or reconstruction not capable of containment within a single room must have the following barriers erected and made presentable on hospital occupied side:

a. Class III & IV (where dust control is the only hazard, and an agreement is reached with the Resident Engineer and Medical Center) - Airtight plastic barrier that extends from the floor to ceiling. Seams must be sealed with duct tape to prevent dust and debris from escaping

b. Class III & IV - Drywall barrier erected with joints covered or sealed to prevent dust and debris from escaping.

c. Class III & IV - Seal all penetrations in existing barrier airtight

d. Class III & IV - Barriers at penetration of ceiling envelopes, chases and ceiling spaces to stop movement air and debris

e. Class IV only - Anteroom or double entrance openings that allow workers to remove protective clothing or vacuum off existing clothing

f. Class III & IV - At elevators shafts or stairways within the field of construction, overlapping flap minimum of two feet wide of polyethylene enclosures for personnel access.

D. Products and Materials:

1. Sheet Plastic: Fire retardant polystyrene, 6-mil thickness meeting local fire codes

2. Barrier Doors: Self Closing Two-hour, fire-rated, solid core wood in steel frame, painted per Project Engineer.

3. Dust proof, two-hour, fire-rated drywall.

4. High Efficiency Particulate Air-Equipped filtration machine rated at 95% capture of 0.3 microns including pollen, mold spores and dust particles. HEPA filters should have ASHRAE 85 or other prefilter to extend the useful life of the HEPA. Provide both primary and secondary filtrations units. Maintenance of equipment and replacement of the HEPA filters and other filters will be in accordance with manufacturer’s instructions.

5. Exhaust Hoses: Heavy duty, flexible steel reinforced; Ventilation Blower Hose

6. Adhesive Walk-off Mats: Provide minimum size mats of 24 inches x 36 inches

7. Disinfectant: Hospital-approved disinfectant or equivalent product

8. Portable Ceiling Access Module

E. Before any construction on site begins, all contractor personnel involved in the construction or renovation activity shall be educated and trained in infection prevention measures established by the medical center.

F. A dust control program will be establish and maintained as part of the contractor’s infection preventive measures in accordance with the FGI Guidelines for Design and Construction of Healthcare Facilities. Prior to start of work, prepare a plan detailing project-specific dust protection measures with associated product data, including periodic

status reports, and submit to Contracting Officer Representative, Contracting Officer and VA Safety Office & Infection Control Practitioner. for review for compliance with contract requirements in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES.

G. The General Contractor shall monitor for airborne disease (e.g. aspergillosis) during construction & provide results to Contracting Officer Representative, Contracting Officer and VA Safety Office & Infection Control Practitioner. A baseline of conditions will be established by the general contractor prior to the start of work and periodically during the construction stage to determine impact of construction activities on indoor air quality with safe thresholds established.

H. In general, the following preventive measures shall be adopted during construction to keep down dust and prevent mold.

1. Contractor shall verify that construction exhaust to exterior is not reintroduced to the medical center through intake vents, or building openings. HEPA filtration is required where the exhaust dust may reenter the medical center.

2. Exhaust hoses shall be exhausted so that dust is not reintroduced to the medical center.

3. Adhesive Walk-off/Carpet Walk-off Mats shall be used at all interior transitions from the construction area to occupied medical center area. These mats shall be changed as often as required to maintain clean work areas directly outside construction area at all times.

4. Vacuum and wet mop all transition areas from construction to the occupied medical center at the end of each workday. Vacuum shall utilize HEPA filtration. Maintain surrounding area frequently. Remove debris as it is created. Transport these outside the construction area in containers with tightly fitting lids.

5. The contractor shall not haul debris through patient-care areas without prior approval of the Resident Engineer and the Medical Center. When, approved, debris shall be hauled in enclosed dust proof containers or wrapped in plastic and sealed with duct tape. No

sharp objects should be allowed to cut through the plastic. Wipe down the exterior of the containers with a damp rag to remove dust. All equipment, tools, material, etc. transported through occupied areas shall be made free from dust and moisture by vacuuming and wipe down.

6. There shall be no standing water during construction. This includes water in equipment drip pans and open containers within the construction areas. All accidental spills must be cleaned up and dried within 12 hours. Remove and dispose of porous materials that remain damp for more than 72 hours.

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

I. Final Cleanup:

1. Upon completion of project, or as work progresses, remove all construction debris from above ceiling, vertical shafts and utility chases that have been part of the construction.

2. Perform HEPA vacuum cleaning of all surfaces in the construction area. This includes walls, ceilings, cabinets, furniture (built-in or free standing), partitions, flooring, etc.

3. All new air ducts shall be cleaned prior to final inspection.

J. Exterior Construction

1. Contractor shall verify that dust will not be introduced into the medical center through intake vents, or building openings. HEPA filtration on intake vents is required where dust may be introduced.

2. Dust created from disturbance of soil such as from vehicle movement will be wetted with use of a water truck as necessary

3. All cutting, drilling, grinding, sanding, or disturbance of materials shall be accomplished with tools equipped with either local exhaust ventilation (i.e. vacuum systems) or wet suppression controls.

1.13 TUBERCULOSIS SCREENING

A. Contractor shall provide written certification that all contract employees assigned to the work site have had a pre-placement tuberculin screening within 90 days prior to assignment to the worksite and been found have negative TB screening reactions. Contractors shall be required to show documentation of negative TB screening reactions for any additional workers who are added after the 90-day requirement before they will be allowed to work on the work site. NOTE: This can be the Center for Disease Control (CDC) and Prevention and two-step skin testing or a Food and Drug Administration (FDA)-approved blood test.

1. Contract employees manifesting positive screening reactions to the tuberculin shall be examined according to current CDC guidelines prior to working on VHA property.

2. Subsequently, if the employee is found without evidence of active (infectious) pulmonary TB, a statement documenting examination by a physician shall be on file with the employer (construction contractor), noting that the employee with a positive tuberculin screening test is without evidence of active (infectious) pulmonary TB.

3. If the employee is found with evidence of active (infectious) pulmonary TB, the employee shall require treatment with a subsequent statement to the fact on file with the employer before being allowed to return to work on VHA property.

1.14 FIRE SAFETY

A. Fire Safety Plan: Establish and maintain a site-specific fire protection program in accordance with 29 CFR 1926. Prior to start of work, prepare a plan detailing project-specific fire safety measures, including periodic status reports, and submit to Contracting Officer Representative, Contracting Officer and VA Safety Office. for review for compliance with contract requirements in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES. This plan may be an element of the Accident Prevention Plan.

B. Site and Building Access: Maintain free and unobstructed access to facility emergency services and for fire, police and other emergency response forces in accordance with NFPA 241.

C. Separate temporary facilities, such as trailers, storage sheds, and dumpsters, from existing buildings and new construction by distances in accordance with NFPA 241. For small facilities with less than 6 m (20 feet) exposing overall length, separate by 3m (10 feet).

D. Temporary Construction Partitions:

1. Install and maintain temporary construction partitions to provide smoke-tight separations between construction areas, the areas that are described in phasing requirements, and adjoining areas (i.e. adjacent spaces/corridors). Construct partitions of gypsum board or treated plywood (flame spread rating of 25 or less in accordance with ASTM E84) on both sides of fire retardant treated wood or metal steel studs. Extend the partitions through suspended ceilings to floor slab deck or roof. Seal joints and penetrations. At door openings, install Class C, ¾ hour fire/smoke rated doors with self-closing devices.

2. Install two-hour fire-rated temporary construction partitions to maintain integrity of existing exit stair enclosures, exit passageways, fire-rated enclosures of hazardous areas, horizontal exits, smoke barriers, vertical shafts and openings enclosures.

3. Close openings in smoke barriers and fire-rated construction to maintain fire ratings. Seal penetrations with listed through-penetration firestop materials in accordance with Section 07 84 00, FIRESTOPPING.

E. Temporary Heating and Electrical: Install, use and maintain installations in accordance with 29 CFR 1926, NFPA 241 and NFPA 70.

F. Means of Egress: Do not block exiting for occupied buildings, including paths from exits to roads. Minimize disruptions and coordinate with Contracting Officer Representative, Contracting Officer and VA Safety Office.

G. Egress Routes for Construction Workers: Maintain free and unobstructed egress. Inspect daily. Report findings and corrective actions weekly to Contracting Officer Representative, Contracting Officer and VA Safety Office.

H. Fire Extinguishers: Provide and maintain extinguishers in construction areas and temporary storage areas in accordance with 29 CFR 1926, NFPA 241 and NFPA 10.

I. Flammable and Combustible Liquids: Store, dispense and use liquids in accordance with 29 CFR 1926, NFPA 241 and NFPA 30.

J. Standpipes: Install, modify or extend standpipes up with each floor in accordance with 29 CFR 1926 and NFPA 241. Do not charge wet standpipes subject to freezing until weather protected.

K. Sprinklers: Install, modify, test and activate new sprinklers prior to removing existing sprinklers.

L. Existing Fire Protection: Do not impair automatic sprinklers, smoke and heat detection, and fire alarm systems, except for portions immediately under construction, and temporarily for connections. Provide fire watch for impairments more than 4 hours in a 24-hour period. Request interruptions in accordance with Article, OPERATIONS AND STORAGE AREAS, and coordinate with Contracting Officer Representative, Contracting Officer and VA Safety Office. All existing or temporary fire protection systems (fire alarms, sprinklers) located in construction areas shall be tested as coordinated with the medical center. Parameters for the testing and results of any tests performed shall be recorded by the medical center and copies provided to the Resident Engineer.

M. Smoke Detectors: Prevent accidental operation. Remove temporary covers at end of work operations each day. Coordinate with Contracting Officer Representative, Contracting Officer and VA Safety Office.

N. Hot Work: Perform and safeguard hot work operations in accordance with NFPA 241 and NFPA 51B. Coordinate with Contracting Officer Representative, Contracting Officer and VA Safety Office at least 5 days in advance. Designate contractor's responsible project-site fire prevention program manager to permit hot work.

O. Fire Hazard Prevention and Safety Inspections: Inspect entire construction areas weekly. Coordinate with, and report findings and corrective actions weekly to Contracting Officer Representative, Contracting Officer and VA Safety Office.

P. Smoking: Smoking is prohibited in and adjacent to construction areas inside existing buildings and additions under construction. In separate and detached buildings under construction, smoking is prohibited except in designated smoking rest areas.

Q. Dispose of waste and debris in accordance with NFPA 241. Remove from buildings daily.

R. If required, submit documentation to the Contracting Officer Representative, Contracting Officer and VA Safety Office that personnel have been trained in the fire safety aspects of working in areas with impaired structural or compartmentalization features.

1.15 ELECTRICAL

A. All electrical work shall comply with NFPA 70 (NEC), NFPA 70B, NFPA 70E, 29 CFR Part 1910 Subpart J – General Environmental Controls, 29 CFR Part 1910 Subpart S – Electrical, and 29 CFR 1926 Subpart K in addition to other references required by contract.

B. All qualified persons performing electrical work under this contract shall be licensed journeyman or master electricians. All apprentice electricians performing under this contract shall be deemed unqualified persons unless they are working under the immediate supervision of a licensed electrician or master electrician.

C. All electrical work will be accomplished de-energized and in the Electrically Safe Work Condition (refer to NFPA 70E for Work Involving Electrical Hazards, including Exemptions to Work Permit). Any Contractor, subcontractor or temporary worker who fails to fully comply with this requirement is subject to immediate termination. Only in rare circumstance where achieving an electrically safe work condition prior to beginning work would increase or cause additional hazards, or is infeasible due to equipment design or operational limitations is energized work permitted. The Chief Engineer, Chief of Facilities Management, Contracting Officer Representative, Contracting Officer and

VA Safety Office with approval of the Medical Center Director will make the determination if the circumstances would meet the exception outlined above. An AHA specific to energized work activities will be developed, reviewed, and accepted prior to the start of that work.

1. Development of a Hazardous Electrical Energy Control Procedure is required prior to de-energization. A single Simple Lockout/Tagout Procedure for multiple work operations can only be used for work involving qualified person(s) de-energizing one set of conductors or circuit part source. Task specific Complex Lockout/Tagout Procedures are required at all other times.

2. Verification of the absence of voltage after de-energization and lockout/tagout is considered “energized electrical work” (live work) under NFPA 70E, and shall only be performed by qualified persons wearing appropriate shock protective (voltage rated) gloves and arc rate personal protective clothing and equipment, using Underwriters Laboratories (UL) tested and appropriately rated contact electrical testing instruments or equipment appropriate for the environment in which they will be used.

3. Personal Protective Equipment (PPE) and electrical testing instruments will be readily available for inspection by the The Chief Engineer, Chief of Facilities Management, Contracting Officer Representative, Contracting Officer and VA Safety Office.

D. Before beginning any electrical work, an Activity Hazard Analysis (AHA) will be conducted to include Shock Hazard and Arc Flash Hazard analyses (NFPA Tables can be used only as a last alterative and it is strongly suggested a full Arc Flash Hazard Analyses be conducted). Work shall not begin until the AHA for the work activity has been accepted by the Contracting Officer Representative, Contracting Officer and VA Safety Office and discussed with all engaged in the activity, including the Contractor, subcontractor(s), and Government on-site representatives at preparatory and initial control phase meetings.

E. Ground-fault circuit interrupters. All 120-volt, single-phase 15- and 20-ampere receptacle outlets on construction sites shall have approved ground-fault circuit interrupters for personnel protection. “Assured Equipment Grounding Conductor Program” only is not allowed.

1.16 FALL PROTECTION

A. The fall protection (FP) threshold height requirement is 6 ft (1.8 m) for ALL WORK, unless specified differently or the OSHA 29 CFR 1926 requirements are more stringent, to include steel erection activities, systems-engineered activities (prefabricated) metal buildings, residential (wood) construction and scaffolding work.

1. The use of a Safety Monitoring System (SMS) as a fall protection method is prohibited.

2. The use of Controlled Access Zone (CAZ) as a fall protection method is prohibited.

3. A Warning Line System (WLS) may ONLY be used on floors or flat or low-sloped roofs (between 0 - 18.4 degrees or 4:12 slope) and shall be erected around all sides of the work area (See 29 CFR 1926.502(f) for construction of WLS requirements). Working within the WLS does not require FP. No worker shall be allowed in the area between the roof or floor edge and the WLS without FP. FP is required when working outside the WLS.

4. Fall protection while using a ladder will be governed by the OSHA requirements.

1.17 SCAFFOLDS AND OTHER WORK PLATFORMS

A. All scaffolds and other work platforms construction activities shall comply with 29 CFR 1926 Subpart L.

B. The fall protection (FP) threshold height requirement is 6 ft (1.8 m) as stated in Section 1.16.

C. The following hierarchy and prohibitions shall be followed in selecting appropriate work platforms.

1. Scaffolds, platforms, or temporary floors shall be provided for all work except that can be performed safely from the ground or similar footing.

2. Ladders less than 20 feet may be used as work platforms only when use of small hand tools or handling of light material is involved.

3. Ladder jacks, lean-to, and prop-scaffolds are prohibited.

4. Emergency descent devices shall not be used as working platforms.

D. Contractors shall use a scaffold tagging system in which all scaffolds are tagged by the Competent Person. Tags shall be color-coded: green indicates the scaffold has been inspected and is safe to use; red indicates the scaffold is unsafe to use. Tags shall be readily visible, made of materials that will withstand the environment in which they are used, be legible and shall include:

1. The Competent Person’s name and signature;

2. Dates of initial and last inspections.

E. Mast Climbing work platforms: When access ladders, including masts designed as ladders, exceed 20 ft (6 m) in height, positive fall protection shall be used.

1.18 EXCAVATION AND TRENCHES

A. All excavation and trenching work shall comply with 29 CFR 1926 Subpart P.

B. All excavations and trenches 5 feet in depth or greater shall require a written trenching and excavation permit (NOTE – some States and other local jurisdictions require separate state/jurisdiction-issued excavation permits). The permit shall be completed and provided to the Contracting Officer Representative, Contracting Officer and VA Safety Office prior to commencing work for the day. At the end of the day, the permit shall be closed out and provided to the Contracting Officer Representative, Contracting Officer and VA Safety Office. The permit shall be maintained onsite and include the following:

1. Determination of soil classification

2. Indication that utilities have been located and identified. If utilities could not be located after all reasonable attempt, then excavating operations will proceed cautiously.

3. Indication of selected excavation protective system.

4. Indication that the spoil pile will be stored at least 2 feet from the edge of the excavation and safe access provided within 25 feet of the workers.

5. Indication of assessment for a potential toxic, explosive, or oxygen deficient atmosphere.

C. If not using an engineered protective system such as a trench box, shielding, shoring, or other Professional Engineer designed system and using a sloping or benching system, soil classification cannot be Solid Rock or Type A. All soil will be classified as Type B or Type C and sloped or benched in accordance with Appendix B of 29 CFR 1926.

1.19 CRANES

A. All crane work shall comply with 29 CFR 1926 Subpart CC.

B. Prior to operating a crane, the operator must be licensed, qualified or certified to operate the crane. Thus, all the provisions contained with Subpart CC are effective and there is no “Phase In” date of November 10, 2014.

C. A detailed lift permit shall be submitted 14 days prior to the scheduled lift complete with route for truck carrying load, crane load analysis, siting of crane and path of swing. The lift will not be allowed without approval of this document.

D. Crane operators shall not carry loads

1. over the general public or VAMC personnel

2. over any occupied building unless

a. the top two floors are vacated

b. or overhead protection with a design live load of 300 psf is provided

1.20 CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT)

A. All installation, maintenance, and servicing of equipment or machinery shall comply with 29 CFR 1910.147 except for specifically referenced operations in 29 CFR 1926 such as concrete & masonry equipment [1926.702(j)], heavy machinery & equipment [1926.600(a)(3)(i)], and process safety management of highly hazardous chemicals (1926.64). Control of hazardous electrical energy during the installation,

maintenance, or servicing of electrical equipment shall comply with Section 1.15 to include NFPA 70E and other VA specific requirements discussed in the section.

1.21 CONFINED SPACE ENTRY

A. All confined space entry shall comply with 29 CFR 1910.146 except for specifically referenced operations in 29 CFR 1926 such as excavations/trenches [1926.651(g)].

B. A site-specific Confined Space Entry Plan (including permitting process) shall be developed and submitted to the Contracting Officer Representative, Contracting Officer and VA Safety Office.

1.22 WELDING AND CUTTING

As specified in section 1.14, Hot Work: Perform and safeguard hot work operations in accordance with NFPA 241 and NFPA 51B. Coordinate with Contracting Officer Representative, Contracting Officer and VA Safety Office. Obtain permits from Contracting Officer Representative, Contracting Officer and VA Safety Office at least 5 days in advance. Designate contractor's responsible project-site fire prevention program manager to permit hot work.

1.23 LADDERS

A. All Ladder use shall comply with 29 CFR 1926 Subpart X.

B. All portable ladders shall be of sufficient length and shall be placed so that workers will not stretch or assume a hazardous position.

C. Manufacturer safety labels shall be in place on ladders

D. Step Ladders shall not be used in the closed position

E. Top steps or cap of step ladders shall not be used as a step

F. Portable ladders, used as temporary access, shall extend at least 3 ft (0.9 m) above the upper landing surface.

1. When a 3 ft (0.9-m) extension is not possible, a grasping device (such as a grab rail) shall be provided to assist workers in mounting and dismounting the ladder.

2. In no case shall the length of the ladder be such that ladder deflection under a load would, by itself, cause the ladder to slip from its support.

G. Ladders shall be inspected for visible defects on a daily basis and after any occurrence that could affect their safe use. Broken or damaged ladders shall be immediately tagged "DO NOT USE," or with similar wording, and withdrawn from service until restored to a condition meeting their original design.

1.24 FLOOR & WALL OPENINGS

A. All floor and wall openings shall comply with 29 CFR 1926 Subpart M.

B. Floor and roof holes/openings are any that measure over 2 in (51 mm) in any direction of a walking/working surface which persons may trip or fall into or where objects may fall to the level below. See 21.F for covering and labeling requirements. Skylights located in floors or roofs are considered floor or roof hole/openings.

C. All floor, roof openings or hole into which a person can accidentally walk or fall through shall be guarded either by a railing system with toeboards along all exposed sides or a load-bearing cover. When the cover is not in place, the opening or hole shall be protected by a removable guardrail system or shall be attended when the guarding system has been removed, or other fall protection system.

1. Covers shall be capable of supporting, without failure, at least twice the weight of the worker, equipment and material combined.

2. Covers shall be secured when installed, clearly marked with the word “HOLE”, “COVER” or “Danger, Roof Opening-Do Not Remove” or color-coded or equivalent methods (e.g., red or orange “X”). Workers must be made aware of the meaning for color coding and equivalent methods.

3. Roofing material, such as roofing membrane, insulation or felts, covering or partly covering openings or holes, shall be immediately cut out. No hole or opening shall be left unattended unless covered.

4. Non-load-bearing skylights shall be guarded by a load-bearing skylight screen, cover, or railing system along all exposed sides.

5. Workers are prohibited from standing/walking on skylights.

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SECTION 01 74 19
CONSTRUCTION WASTE MANAGEMENT

PART 1 – GENERAL

1.1 DESCRIPTION

A. This section specifies the requirements for the management of non-hazardous building construction and demolition waste.

B. Waste disposal in landfills shall be minimized to the greatest extent possible. Of the inevitable waste that is generated, 95% of the waste material shall be salvaged, recycled or reused. The contractor is responsible for providing documentation and recycling reports to identify the 95% percentage requirement is satisfied.

C. Contractor shall use all reasonable means to divert construction and demolition waste from landfills and incinerators, and facilitate their salvage and recycle not limited to the following:

1. Waste Management Plan development and implementation.
2. Techniques to minimize waste generation.
3. Sorting and separating of waste materials.
4. Salvage of existing materials and items for reuse or resale.
5. Recycling of materials that cannot be reused or sold.

D. At a minimum the following waste categories shall be diverted from landfills:

1. Soil.
2. Inerts (eg, concrete, masonry and asphalt).
3. Clean dimensional wood and palette wood.
4. Green waste (biodegradable landscaping materials).
5. Engineered wood products (plywood, particle board and I-joists, etc).
6. Metal products (eg, steel, wire, beverage containers, copper, etc).
7. Cardboard, paper and packaging.
8. Bitumen roofing materials.
9. Plastics (eg, ABS, PVC).
10. Carpet and/or pad.
11. Gypsum board.
12. Insulation.
13. Paint.
14. Fluorescent lamps.

1.2 RELATED WORK

A. Section 02 41 00, DEMOLITION.

B. Section 01 00 00, GENERAL REQUIREMENTS.

1.3 QUALITY ASSURANCE

A. Contractor shall practice efficient waste management when sizing, cutting and installing building products. Processes shall be employed to ensure the generation of as little waste as possible. Construction and Demolition waste includes products of the following:
   1. Excess or unusable construction materials.
   2. Packaging used for construction products.
   3. Poor planning and/or layout.
   4. Construction error.
   5. Over ordering.
   6. Weather damage.
   7. Contamination.
   8. Mishandling.
   9. Breakage.

B. Establish and maintain the management of non-hazardous building construction and demolition waste set forth herein. Conduct a site assessment to estimate the types of materials that will be generated by demolition and construction.

C. Contractor shall develop and implement procedures to recycle construction and demolition waste to a minimum of 95 percent.

D. Contractor shall be responsible for implementation of any special programs involving rebates or similar incentives related to recycling. Any revenues or savings obtained from salvage or recycling shall accrue to the contractor.

E. Contractor shall provide all demolition, removal and legal disposal of materials. Contractor shall ensure that facilities used for recycling, reuse and disposal shall be permitted for the intended use to the extent required by local, state, federal regulations. The Whole Building Design Guide website http://www.wbdg.org/tools/cwm.php provides a Construction Waste Management Database that contains information on companies that haul, collect, and process recyclable debris from construction projects.

F. Contractor shall assign a specific area to facilitate separation of materials for reuse, salvage, recycling, and return. Such areas are to be kept neat and clean and clearly marked in order to avoid contamination or mixing of materials.

G. Contractor shall provide on-site instructions and supervision of separation, handling, salvaging, recycling, reuse and return methods to be used by all parties during waste generating stages.

H. Record on daily reports any problems in complying with laws, regulations and ordinances with corrective action taken.

1.4 TERMINOLOGY

A. Class III Landfill: A landfill that accepts non-hazardous resources such as household, commercial and industrial waste resulting from construction, remodeling, repair and demolition operations.

B. Clean: Untreated and unpainted; uncontaminated with adhesives, oils, solvents, mastics and like products.

C. Construction and Demolition Waste: Includes all non-hazardous resources resulting from construction, remodeling, alterations, repair and demolition operations.

D. Dismantle: The process of parting out a building in such a way as to preserve the usefulness of its materials and components.

E. Disposal: Acceptance of solid wastes at a legally operating facility for the purpose of land filling (includes Class III landfills and inert fills).

F. Inert Backfill Site: A location, other than inert fill or other disposal facility, to which inert materials are taken for the purpose of filling an excavation, shoring or other soil engineering operation.

G. Inert Fill: A facility that can legally accept inert waste, such as asphalt and concrete exclusively for the purpose of disposal.

H. Inert Solids/Inert Waste: Non-liquid solid resources including, but not limited to, soil and concrete that does not contain hazardous waste or soluble pollutants at concentrations in excess of water-quality objectives established by a regional water board, and does not contain significant quantities of decomposable solid resources.

I. Mixed Debris: Loads that include commingled recyclable and non-recyclable materials generated at the construction site.

J. Mixed Debris Recycling Facility: A solid resource processing facility that accepts loads of mixed construction and demolition debris for the purpose of recovering re-usable and recyclable materials and disposing non-recyclable materials.

K. Permitted Waste Hauler: A company that holds a valid permit to collect and transport solid wastes from individuals or businesses for the purpose of recycling or disposal.

L. Recycling: The process of sorting, cleansing, treating, and reconstituting materials for the purpose of using the altered form in the manufacture of a new product. Recycling does not include burning, incinerating or thermally destroying solid waste.
   1. On-site Recycling – Materials that are sorted and processed on site for use in an altered state in the work, i.e. concrete crushed for use as a sub-base in paving.
   2. Off-site Recycling – Materials hauled to a location and used in an altered form in the manufacture of new products.

M. Recycling Facility: An operation that can legally accept materials for the purpose of processing the materials into an altered form for the manufacture of new products. Depending on the types of materials accepted and operating procedures, a recycling facility may or may not be required to have a solid waste facilities permit or be regulated by the local enforcement agency.

N. Reuse: Materials that are recovered for use in the same form, on-site or off-site.

O. Return: To give back reusable items or unused products to vendors for credit.

P. Salvage: To remove waste materials from the site for resale or re-use by a third party.

Q. Source-Separated Materials: Materials that are sorted by type at the site for the purpose of reuse and recycling.

R. Solid Waste: Materials that have been designated as non-recyclable and are discarded for the purposes of disposal.

S. Transfer Station: A facility that can legally accept solid waste for the purpose of temporarily storing the materials for re-loading onto other trucks and transporting them to a landfill for disposal, or recovering some materials for re-use or recycling.

1.5 SUBMITTALS

A. In accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, and SAMPLES, furnish the following:

B. Prepare and submit to the VA Project Engineer & Contracting Officer a written demolition debris management plan. The plan shall include, but not be limited to, the following information:
   1. Procedures to be used for debris management.
   2. Techniques to be used to minimize waste generation.
   3. Analysis of the estimated job site waste to be generated:

a. List of each material and quantity to be salvaged, reused, recycled.
b. List of each material and quantity proposed to be taken to a landfill.

4. Detailed description of the Means/Methods to be used for material handling.
   a. On site: Material separation, storage, protection where applicable.
   b. Off site: Transportation means and destination. Include list of materials.
      1) Description of materials to be site-separated and self-hauled to designated facilities.
      2) Description of mixed materials to be collected by designated waste haulers and removed from the site.
   c. The names and locations of mixed debris reuse and recycling facilities or sites.
   d. The names and locations of trash disposal landfill facilities or sites.
   e. Documentation that the facilities or sites are approved to receive the materials.

C. Designated Manager responsible for instructing personnel, supervising, documenting and administer over meetings relevant to the Waste Management Plan.

D. Monthly summary of construction and demolition debris diversion and disposal, quantifying all materials generated at the work site and disposed of or diverted from disposal through recycling.

1.6 APPLICABLE PUBLICATIONS

A Publications listed below form a part of this specification to the extent referenced. Publications are referenced by the basic designation only. In the event that criteria requirements conflict, the most stringent requirements shall be met.

B. U.S. Green Building Council (USGBC):
LEED Green Building Rating System for New Construction

1.7 RECORDS

Maintain records to document the quantity of waste generated; the quantity of waste diverted through sale, reuse, or recycling; and the quantity of waste disposed by landfill or incineration. Records shall be kept in accordance with the LEED Reference Guide and LEED Template.

PART 2 - PRODUCTS

2.1 MATERIALS

A. List of each material and quantity to be salvaged, recycled, reused.

B. List of each material and quantity proposed to be taken to a landfill.

C. Material tracking data: Receiving parties, dates removed, transportation costs, weight tickets, tipping fees, manifests, invoices, net total costs or savings.

PART 3 - EXECUTION

3.1 COLLECTION

A. Provide all necessary containers, bins and storage areas to facilitate effective waste management. All containers, bins and storage areas shall be secured, locked and covered.

B. Clearly identify containers, bins and storage areas so that recyclable materials are separated from trash and can be transported to respective recycling facility for processing.

C. Hazardous wastes shall be separated, stored, disposed of according to local, state, federal regulations.

3.2 DISPOSAL

A. Contractor shall be responsible for transporting and disposing of materials that cannot be delivered to a source-separated or mixed materials recycling facility to a transfer station or disposal facility that can accept the materials in accordance with state and federal regulations.

B. Construction or demolition materials with no practical reuse or that cannot be salvaged or recycled shall be disposed of at a landfill or incinerator.

3.3 REPORT

A. With each application for progress payment, submit a summary of construction and demolition debris diversion and disposal including beginning and ending dates of period covered.

B. Quantify all materials diverted from landfill disposal through salvage or recycling during the period with the receiving parties, dates removed, transportation costs, weight tickets, manifests, invoices. Include the net total costs or savings for each salvaged or recycled material.

C. Quantify all materials disposed of during the period with the receiving parties, dates removed, transportation costs, weight tickets, tipping

fees, manifests, invoices. Include the net total costs for each disposal.

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SECTION 02 41 00
DEMOLITION

PART 1 - GENERAL

1.1 DESCRIPTION:

This section specifies demolition and removal of buildings, portions of buildings, utilities, other structures and debris from trash dumps shown.

1.2 RELATED WORK:

B. Safety Requirements: Section 01 35 26 Safety Requirements Article, ACCIDENT PREVENTION PLAN (APP).

C. Disconnecting utility services prior to demolition: Section 01 00 00, GENERAL REQUIREMENTS.

D. Reserved items that are to remain the property of the Government: Section 01 00 00, GENERAL REQUIREMENTS.

E. Asbestos Removal: Section 02 82 11, TRADITIONAL ASBESTOS ABATEMENT.

F. Lead Paint: Section 02 83 33.13, LEAD-BASED PAINT REMOVAL AND DISPOSAL.

G. Environmental Protection: Section 01 57 19, TEMPORARY ENVIRONMENTAL CONTROLS.

H. Construction Waste Management: Section 017419 CONSTRUCTION WASTE MANAGEMENT.

I. Infectious Control: Section 01 35 26, SAFETY REQUIREMENTS, Article 1.12, INFECTION CONTROL.

1.3 PROTECTION:

A. Perform demolition in such manner as to eliminate hazards to persons and property; to minimize interference with use of adjacent areas, utilities and structures or interruption of use of such utilities; and to provide free passage to and from such adjacent areas of structures. Comply with requirements of GENERAL CONDITIONS Article, ACCIDENT PREVENTION.

B. Provide safeguards, including warning signs, barricades, temporary fences, warning lights, and other similar items that are required for protection of all personnel during demolition and removal operations. Comply with requirements of Section 01 00 00, GENERAL REQUIREMENTS, Article PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES AND IMPROVEMENTS.

C. Maintain fences, barricades, lights, and other similar items around exposed excavations until such excavations have been completely filled.

D. Provide enclosed dust chutes with control gates from each floor to carry debris to truck beds and govern flow of material into truck. Provide overhead bridges of tight board or prefabricated metal construction at dust chutes to protect persons and property from falling debris.

E. Prevent spread of flying particles and dust. Sprinkle rubbish and debris with water to keep dust to a minimum. Do not use water if it results in hazardous or objectionable condition such as, but not limited to; ice, flooding, or pollution. Vacuum and dust the work area daily.

F. In addition to previously listed fire and safety rules to be observed in performance of work, include following:
   1. No wall or part of wall shall be permitted to fall outwardly from structures.
   2. Wherever a cutting torch or other equipment that might cause a fire is used, provide and maintain fire extinguishers nearby ready for immediate use. Instruct all possible users in use of fire extinguishers.
   3. Keep hydrants clear and accessible at all times. Prohibit debris from accumulating within a radius of 4500 mm (15 feet) of fire hydrants.

G. Before beginning any demolition work, the Contractor shall survey the site and examine the drawings and specifications to determine the extent of the work. The contractor shall take necessary precautions to avoid damages to existing items to remain in place, to be reused, or to remain the property of the Medical Center; any damaged items shall be repaired or replaced as approved by the Resident Engineer. The Contractor shall coordinate the work of this section with all other work and shall construct and maintain shoring, bracing, and supports as required. The Contractor shall ensure that structural elements are not overloaded and shall be responsible for increasing structural supports or adding new supports as may be required as a result of any cutting, removal, or demolition work performed under this contract. Do not overload structural elements. Provide new supports and reinforcement for existing construction weakened by demolition or removal works. Repairs, reinforcement, or structural replacement must have Resident Engineer’s approval.

H. The work shall comply with the requirements of Section 01 57 19, TEMPORARY ENVIRONMENTAL CONTROLS.

I. The work shall comply with the requirements of Section 01 00 00, GENERAL REQUIREMENTS, Article 1.7 INFECTION PREVENTION MEASURES.

PART 2 - PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 DEMOLITION:

A. Completely demolish and remove buildings and structures, including all appurtenances related or connected thereto, as noted below:
   1. As required for installation of new utility service lines.
   2. To full depth within an area defined by hypothetical lines located 1500 mm (5 feet) outside building lines of new structures.

B. Debris, including brick, concrete, stone, metals and similar materials shall become property of Contractor and shall be disposed of by him daily, off the Medical Center to avoid accumulation at the demolition site. Materials that cannot be removed daily shall be stored in areas specified by the Resident Engineer. Break up concrete slabs below grade that do not require removal from present location into pieces not exceeding 600 mm (24 inches) square to permit drainage. Contractor shall dispose debris in compliance with applicable federal, state or local permits, rules and/or regulations.

C. Remove and legally dispose of all materials, other than earth to remain as part of project work, from any trash dumps shown. Materials removed shall become property of contractor and shall be disposed of in compliance with applicable federal, state or local permits, rules and/or regulations. All materials in the indicated trash dump areas, including above surrounding grade and extending to a depth of 1500mm (5feet) below surrounding grade, shall be included as part of the lump sum compensation for the work of this section. Materials that are located beneath the surface of the surrounding ground more than 1500 mm (5 feet), or materials that are discovered to be hazardous, shall be handled as unforeseen. The removal of hazardous material shall be referred to Hazardous Materials specifications.

3.2 CLEAN-UP:

On completion of work of this section and after removal of all debris, leave site in clean condition satisfactory to Resident Engineer. Clean-up shall include off the Medical Center disposal of all items and

materials not required to remain property of the Government as well as all debris and rubbish resulting from demolition operations.

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SECTION 02 83 33.13
LEAD-BASED PAINT REMOVAL AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Removing and disposal of lead-based paint in rooms B-201C, B-202, B-203, and B-204.

1.2 RELATED REQUIREMENTS

A. Hazardous Material Abatement: Section 02 82 11, TRADITIONAL ASBESTOS ABATEMENT.

B. Demolition Disturbing Lead-Based Paint: Section 02 41 00, DEMOLITION.

C. Surface Preparation Disturbing Lead-Based Paint: Section 09 91 00, PAINTING.

1.3 DEFINITIONS

A. Action Level: Employee exposure, without regard to use of respirator, to lead airborne concentration of 30 micrograms per cubic meter (0.03 parts per million) of air averaged over 8-hour period. As used in this section, ”30 micrograms per cubic meter of air (0.03 parts per million)" refers to action level.

B. Area Monitoring: Sampling of lead concentrations within lead control area and inside physical boundaries which are representative of airborne lead concentrations which may reach breathing zone of personnel potentially exposed to lead.

C. Breathing Zone: Area within hemisphere, forward of shoulders, with 150 mm to 225 mm (6 to 9 inches) radius and center at nose or mouth of employee.

D. Certified Industrial Hygienist (CIH): As used in this section, refers to an Industrial Hygienist employed by Contractor.

E. Change Rooms and Shower Facilities: Rooms within designated physical boundary around lead control area equipped with separate storage facilities for clean protective work clothing and equipment and for street clothes which prevent cross- contamination.

F. Competent Person: Person capable of identifying lead hazards in work area and authorized by contractor to take corrective action.

G. Decontamination Room: Room for removal of contaminated personal protective equipment (PPE).

H. Eight-Hour Time Weighted Average (TWA): Airborne concentration of lead averaged over 8-hour workday to which an employee is exposed.

I. High Efficiency Particulate Air (HEPA) Filter Equipment: HEPA filtered vacuuming equipment with UL 586 filter system capable of collecting and retaining lead-contaminated paint dust. HEPA filter means 99.97 percent efficient against 0.3 micron (0.012 mil) size particles.

J. Lead: Metallic lead, inorganic lead compounds, and organic lead soaps. Excluded from this definition are other organic lead compounds.

K. Lead Control Area: Enclosed area or structure with full containment to prevent spreading lead dust, paint chips, and debris from lead-based paint removal operations. Lead control area is isolated by physical boundaries to prevent unauthorized entry of personnel.

L. Lead Permissible Exposure Limit (PEL): Fifty micrograms per cubic meter (0.05 parts per million) of air as 8-hour time weighted average as determined by 29 CFR Part 1910.1025. When employee is exposed for more than 8 hours per work day, determine PEL by following formula. PEL micrograms/cubic meter (parts per million) of air = 400/No. of hrs. worked per day.

M. Personnel Monitoring: Sampling of lead concentrations within employee breathing zone to determine 8-hour time weighted average concentration according to 29 CFR Part 1910.1025. Take samples representative of employee's work tasks.

N. Physical Boundary: Area physically roped or partitioned off around enclosed lead control area to limit unauthorized entry of personnel. As used in this section, "inside boundary" shall mean same as "outside lead control area."

1.4 APPLICABLE PUBLICATIONS

A. Comply with references to extent specified in this section.

B. American National Standards Institute (ANSI):

1. Z9.2-12 - Fundamentals Governing the Design & Operation of Local Exhaust Ventilation Systems.

C. Code of Federal Regulations (CFR):

1. 29 CFR Part 1910 - Occupational Safety and Health Standards.
2. 29 CFR Part 1926 - Safety and Health Regulations for Construction.
3. 40 CFR Part 260 - Hazardous Waste Management System: General.
4. 40 CFR Part 261 - Identification and Listing of Hazardous Waste.

5. 40 CFR Part 262 - Standards Applicable to Generators of Hazardous Waste.
6. 40 CFR Part 263 - Standards Applicable to Transporters of Hazardous Waste.
7. 40 CFR Part 264 - Standards for Owners and Operations of Hazardous Waste Treatment, Storage, and Disposal Facilities.
8. 40 CFR Part 265 - Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities.
9. 40 CFR Part 268 - Land Disposal Restrictions.
10. 49 CFR Part 172 - Hazardous Material Table, Special Provisions, Hazardous Material Communications, Emergency Response Information, and Training Requirements, and Security Plans.
11. 49 CFR Part 178 - Specifications for Packagings.

D. Underwriters Laboratories (UL):
1. 586-09 - High-Efficiency, Particulate, Air Filter Units.

1.5 PRE-REMOVAL MEETINGS

A. Conduct pre-removal meeting at project site minimum 30 days before beginning Work of this section.
1. Required Participants:
a. Contracting Officer's Representative.
b. Certified Industrial Hygienist.
c. Contractor.
d. Paint removal contractor.
e. Other installers responsible for finishing resulting surfaces.
2. Meeting Agenda: Distribute agenda to participants minimum 3 days before meeting.
a. Respiratory protection program.
b. Hazard communication program.
c. Hazardous waste management plan.
d. Safety and health regulation compliance.
e. Employee training.
f. Removal schedule.
g. Removal sequence.
h. Preparatory work.
i. Protection before, during, and after removal.
j. Removal.
k. Inspecting and testing.
l. Other items affecting successful completion.

3. Document and distribute meeting minutes to participants to record decisions affecting installation.

1.6 SUBMITTALS

A. Submittal Procedures: Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.

B. Manufacturer's Literature and Data:

1. Description of each product.
   a. Paint removal products.
   b. Vacuum filters.
   c. Respirators.
2. Safety data sheet for each paint removal product.
3. Installation instructions.
   a. Paint removal products.

C. Test Reports: Submit testing laboratory reports.

1. Submit air monitoring results within three working days, signed by testing laboratory employee performing air monitoring, employee analyzing sample, and CIH.

D. Certificates: Certify completed training.

1. Submit certificate for each employee signed and dated by CIH and employee stating employee was trained.

E. Qualifications: Substantiate qualifications comply with specifications.

1. Paint removal contractor.
2. Testing laboratory.
   a. Name, address, and telephone number.
   b. Current evidence of participation in NIOSH PAT Program.
   c. Copy of current AIHA accreditation certificate.
3. Industrial hygienist.
   a. Name, address, and telephone number.
   b. Resume showing previous experience.
   c. Copy of current ABIH CIH certification.
4. Paint disposal facility.
   a. Name, address, and telephone number.
   b. Current license or authorization to receive and dispose lead contaminated waste.

F. Record Documents:

1. Completed and signed hazardous waste manifest from waste transporter.
2. Paint disposal facility receipts and disposition reports.

3. Certification of medical examinations.
4. Employee training certification.
5. Provide completed packet of documents to VA COTR and GEMS Manager.

1.7 QUALITY ASSURANCE

A. Safety and Health Regulation Compliance:
   1. Comply with laws, ordinances, rules, and regulations of federal, state, and local authorities having jurisdiction regarding removing, handling, storing, transporting, and disposing lead waste materials.
      a. Comply with applicable requirements of 29 CFR Part 1910.1025.
      b. Notify Contracting Officer's Representative and request resolution of conflicts between regulations and specified requirements before starting work.
   2. Comply with the following local laws, ordinances, criteria, rules and regulations regarding removing, handling, storing, transporting, and disposing lead-contaminated materials:

B. Paint Removal Contractor: Experienced contractor, registered or licensed by applicable state agency regulating lead-based paint removal.

C. Testing Laboratory: State certified independent testing laboratory experienced in airborne lead monitoring, testing, and reporting.
   1. Successful participant in NIOSH Proficiency Analytical Testing (PAT) Program within prior 12 months.
   2. Accredited by American Industrial Hygiene Association (AIHA).

D. Certified Industrial Hygienist: Certified as CIH by American Board of Industrial Hygiene in comprehensive practice and responsible for:
   1. Certify Training.
   2. Review and approve lead-based paint removal plan for conformance to applicable referenced standards.
   3. Inspect lead-based paint removal work for conformance with approved plan.
   4. Direct monitoring.
   5. Ensure work is performed according to specifications.
   6. Ensure personnel and environment hazardous exposures are adequately controlled.

E. Paint Disposal Facility: State certified disposal facility qualified to receive and dispose lead-based paint.

F. Lead-based Paint Removal Plan:

1. Submit detailed, site-specific plan describing lead-based paint removal procedures.
2. Include sketch showing location, size, and details of lead control areas, decontamination rooms, change rooms, shower facilities, and mechanical ventilation system.
3. Include eating, drinking, and restroom procedures, interface of trades, work sequencing, collected wastewater and paint debris disposal plan, air sampling plan, respirators, protective equipment, and detailed description of containment methods ensuring airborne lead concentrations do not exceed action level outside lead control area.
    a. Eating, drinking, and smoking are not acceptable within lead control area.
4. Include air sampling, training and strategy, sampling methodology, frequency, duration, and qualifications of air monitoring personnel.

G. Respiratory Protection Program: Establish and implement program required by 29 CFR Part 1910.134, 29 CFR Part 1910.1025, and 29 CFR Part 1926.62.
1. Provide each employee negative pressure or other appropriate respirator.
    a. Test fit each employee's respirator at initial fitting and maximum 6 month intervals, as required by 29 CFR Part 1926.62.

H. Hazard Communication Program: Establish and implement program required by 29 CFR Part 1910.1200.

I. Hazardous Waste Management Plan: Establish and implement plan according to applicable requirements of Federal, State, and local hazardous waste regulations including the following:
1. Identification of hazardous wastes associated with work.
2. Estimated quantities of generated and disposed waste.
3. Names and qualifications of each contractor transporting, storing, treating, and disposing wastes. Include facility location and 24-hour point of contact.
4. Names and qualifications (experience and training) of personnel working on-site with hazardous wastes.
5. List of required waste handling equipment including cleaning, volume reduction, and transport equipment.
6. Spill prevention, containment, and cleanup contingency implementation measures.

7. Work plan and schedule for waste containment, removal, and disposal with daily waste cleaned up and containerization.
8. Hazardous waste disposal cost.

1.8 WARRANTY

A. Construction Warranty

PART 2 - PRODUCTS

2.1 PAINT REMOVAL PRODUCTS

A. Chemical Stripper: Biodegradable, non-toxic, capable of removing existing paint layers in one application, and acceptable to CIH.

2.2 ACCESSORIES

A. Waste Collection Drums: 49 CFR Part 178; Type 1A2, steel, removable head, 200 L (55 gal.) capacity, capable of containing waste without loss.
B. Vacuum Cleaner: HEPA filtered type.
C. Scrapers:
   1. Metal type for use on metal, concrete, and masonry surfaces.
   2. Plastic type for use on wood, plaster, gypsum board, and other surfaces.
D. Rinse Water: Potable.
E. Cleaning Cloths: Cotton.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Before exposure to lead-contaminated dust, provide workers with comprehensive medical examination required by 29 CFR Part 1926.62 (I) (1) (i) and (ii).
   1. Exemption: Examination is not required when employee medical records show last examination required by 29 CFR Part 1926.62(I) was completed within previous 12 months.
B. Maintain complete and accurate employee medical records according to 29 CFR Part 1910.20.
C. Train each employee performing paint removal, disposal, and air sampling operations according to 29 CFR Part 1926.62.
   1. Certify training is completed before employee is permitted to work on project and enter lead control area.

3.2 PREPARATION

A. Protect existing work indicated to remain.
   1. Perform paint removal work without damaging and contaminating adjacent work.
   2. Restore damage and contamination to original condition.

B. Notify Contracting Officer 20 days before starting paint removal work.

C. Lead Control Area Requirements:
   1. Establish a lead control area by completely enclosing with containment screens the area or structure where lead-containing paint removal operations will be performed.
   2. Contain removal operations using negative pressure full containment system with minimum one change room and HEPA filtered exhaust.

D. Boundary Requirements: Provide physical boundaries around lead control area by roping off area, designated on drawings, or providing curtains, portable partitions or other enclosures to ensure that airborne lead concentrations do not meet or exceed action level outside of lead control area.

E. Heating, Ventilating and Air Conditioning (HVAC) Systems: Shut down, lock out, and isolate HVAC systems supplying exhausting, and passing through lead control areas. Seal HVAC inlets and outlet within lead control area with 6-mil plastic sheet and tape. Tape seal seams in HVAC components passing through lead control area.

F. Change Room and Shower Facilities: Provide clean change rooms and shower facilities within physical boundary around lead control area according to 29 CFR Part 1926.62.

G. Mechanical Ventilation System:
   1. Provide ventilation system to control personnel exposure to lead according to 29 CFR Part 1926.57.
   2. Design, construct, install, and maintain HEPA filtered fixed local exhaust ventilation system according to ANSI Z9.2 and approved by CIH.
   3. Exhaust ventilation air to exterior wherever possible.
   4. When exhaust ventilation air must be recirculated into work area, provide HEPA filter with reliable back-up filter and controls to monitor lead concentration in return air and to bypass recirculation system automatically when system fails.

H. Personnel Protection: Provide and use required protective clothing and equipment within lead control area.

I. Warning Signs: Provide warning signs complying with 29 CFR Part 1926.62 at lead control area approaches. Locate signs so personnel read signs and take necessary precautions before entering lead control area.

3.3 WORK PROCEDURES

A. Remove lead-based paint according to approved lead-based paint removal plan.

1. Perform work only in presence of CIH or Industrial Hygienist (IH) Technician under direction of CIH ensuring continuous inspection of work in progress and direction of air monitoring activities.
2. Handle, store, transport, and dispose lead or and lead contaminated waste according to 40 CFR Part 260, 40 CFR Part 261, 40 CFR Part 262, 40 CFR Part 263, 40 CFR Part 264, and 40 CFR Part 265. Comply with land disposal restriction notification requirements as required by 40 CFR Part 268.

B. Use procedures and equipment required to limit occupational and environmental lead exposure when lead-based paint is removed according to 29 CFR Part 1926.62.

C. Dispose removed paint and waste according to Environmental Protection Agency (EPA), federal, state, and local requirements.

D. Personnel Exiting Procedures:

1. When personnel exit lead control area, comply with the following procedures:
   a. Vacuum exposed clothing surfaces.
   b. Remove protective clothing and equipment in decontamination room. Place clothing in approved impermeable disposal bag.
   c. Shower.
   d. Dress in clean clothes before leaving lead control area.

E. Monitoring - General:

1. Monitor airborne lead concentrations according to 29 CFR Part 1910.1025by testing laboratory as directed by CIH.
2. Take personal air monitoring samples on employees anticipated to have greatest exposure risk as determined by CIH. Additionally, take air monitoring samples on minimum 25 percent of work crew or minimum of two employees, whichever is greater, during each work shift.
3. Submit results of air monitoring samples, signed by CIH, within 24 hours after taking air samples. Notify Contracting Officer's Representative immediately of lead exposure at or exceeding action level outside of lead control area.

F. Monitoring During Paint Removal:
   1. Perform personal and area monitoring during entire paint removal operation.
   2. Conduct area monitoring at physical boundary daily for each work shift to ensure unprotected personnel are not exposed above action level anytime.
   3. For outdoor operations, take at least one sample on each shift leeward of lead control area. When adjacent areas are contaminated, clean area of contamination and have CIH visually inspect and certify lead contamination is cleaned.
   4. Stop work when outside boundary lead levels meet or exceed action level. Notify Contracting Officer's Representative, immediately.
   5. Correct conditions causing increased lead concentration as directed by CIH.
   6. Review sampling data collected during work stoppage to determine if conditions require additional work method modifications as determined by CIH.
   7. Resume paint removal when approved by CIH.

3.4 LEAD-BASED PAINT REMOVAL

A. Remove paint within areas indicated on drawings completely exposing substrate. Minimize damage to substrate.
B. Comply with paint removal processes described lead paint removal plan.
C. Lead-Based Paint Removal: Select processes for each application to minimize work area lead contamination and waste.

3.5 SUBSTRATE SURFACE PREPARATION

A. Protect substrates from deterioration and contamination until refinished.
   1. Protect metal substrates from flash rusting.
B. Prepare and paint substrates according to Section 09 91 00, PAINTING.

3.6 FIELD QUALITY CONTROL

A. Field Tests: Performed by testing laboratory specified in Section 01 45 29, TESTING LABORATORY SERVICES.
B. Perform sampling and testing for:
   1. Air monitoring.
   2. Lead based paint.

3.7 CLEANING AND DISPOSAL

A. Cleaning:

1. Maintain lead control area surfaces free of accumulating paint chips and dust. Confine dust, debris, and waste to work area.
2. Vacuum clean work area daily, at end of each shift, and when paint removal operation is complete.

B. CIH Certification: Certify in writing that inside and outside lead control area air monitoring samples are less than action level, employee respiratory protection was adequate, the work was performed according to 29 CFR Part 1926.62, and no visible accumulations of lead-based paint and dust remain on worksite.
1. Do not remove lead control area or roped-off boundary and warning signs before Contracting Officer's Representative's receipt of CIH's certification.
2. Reclean areas showing dust or residual paint chips.

C. Testing: Where indicated and when directed by Contracting Officer's Representative, test lead-based paint residue and used abrasive according to 40 CFR Part 261 for hazardous waste.

D. Waste Collection:
1. Collect lead-contaminated materials including waste, scrap, debris, bags, containers, equipment, and clothing, which may produce airborne lead contamination.
2. Place lead contaminated materials in waste disposal drums. Label each drum identifying waste type according to 49 CFR Part 172 and date waste materials were first put into drum. Obtain and complete the Uniform Hazardous Waste Manifest forms. Comply with land disposal restriction notification requirements required by 40 CFR Part 268:
3. Coordinate temporary storage location on project site with Contracting Officer's Representative.

E. Waste Disposal:
1. Do not store hazardous waste drums in temporary storage location longer than 90 calendar days from drum label date.
2. Remove, transport, and deliver drums to paint disposal facility.
   a. Obtain signed receipt including date, time, quantity, and description of materials received according to 40 CFR Part 262.
   b. Obtain final report of materials disposition after disposal completion.

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SECTION 06 10 00
ROUGH CARPENTRY

PART 1 - GENERAL

1.1 DESCRIPTION:

A. This section specifies wood blocking, framing, sheathing, furring, nailers, sub-flooring, rough hardware, and light wood construction.

1.2 RELATED WORK:

A. Milled woodwork: Section 06 20 00, FINISH CARPENTRY.

B. Gypsum sheathing: Section 09 29 00, GYPSUM BOARD.

C. Cement board sheathing: Section 06 16 63, CEMENTITIOUS SHEATHING.

1.3 SUBMITTALS:

A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.

B. Shop Drawings showing framing connection details, fasteners, connections and dimensions.

C. Manufacturer’s Literature and Data:

1. Submit data for lumber, panels, hardware and adhesives.
2. Submit data for wood-preservative treatment from chemical treatment manufacturer and certification from treating plants that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
3. Submit data for fire retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.
4. For products receiving a waterborne treatment, submit statement that moisture content of treated materials was reduced to levels specified before shipment to project site.

D. Manufacturer’s certificate for unmarked lumber.

1.4 PRODUCT DELIVERY, STORAGE AND HANDLING:

A. Protect lumber and other products from dampness both during and after delivery at site.

B. Pile lumber in stacks in such manner as to provide air circulation around surfaces of each piece.

C. Stack plywood and other board products so as to prevent warping.

D. Locate stacks on well drained areas, supported at least 152 mm (6 inches) above grade and cover with well-ventilated sheds having

firmly constructed over hanging roof with sufficient end wall to protect lumber from driving rain.

1.5 QUALITY ASSURANCE:

A. Installer: A firm with a minimum of three (3) years' experience in the type of work required by this section.

1.6 GRADING AND MARKINGS:

A. Any unmarked lumber or plywood panel for its grade and species will not be allowed on VA Construction sites for lumber and material not normally grade marked, provide manufacturer's certificates (approved by an American Lumber Standards approved agency) attesting that lumber and material meet the specified the specified requirements.

1.7 APPLICABLE PUBLICATIONS:

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

B. American Forest and Paper Association (AFPA):

NDS-15.....National Design Specification for Wood Construction

WCD1-01.....Details for Conventional Wood Frame Construction

C. American Institute of Timber Construction (AITC):

A190.1-07.....Structural Glued Laminated Timber

D. American Society of Mechanical Engineers (ASME):

B18.2.1-12(R2013).....Square and Hex Bolts and Screws

B18.2.2-10.....Square and Hex Nuts

B18.6.1-81(R2008).....Wood Screws

E. American Plywood Association (APA):

E30-11.....Engineered Wood Construction Guide

F. ASTM International (ASTM):

A653/A653M-13.....Steel Sheet Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot Dip Process

C954-11.....Steel Drill Screws for the Application of Gypsum Board or Metal Plaster Bases to Steel Studs from 0.033 inch (2.24 mm) to 0.112-inch (2.84 mm) in thickness

C1002-14.....Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Metal Studs

D198-14.....Test Methods of Static Tests of Lumber in Structural Sizes

D2344/D2344M-13.....Test Method for Short-Beam Strength of Polymer Matrix Composite Materials and Their Laminates

D2559-12a.....Adhesives for Structural Laminated Wood Products for Use Under Exterior (Wet Use) Exposure Conditions

D3498-03(R2011).....Adhesives for Field-Gluing Plywood to Lumber Framing for Floor Systems

D6108-13.....Test Method for Compressive Properties of Plastic Lumber and Shapes

D6109-13.....Test Methods for Flexural Properties of Unreinforced and Reinforced Plastic Lumber and Related Products

D6111-13a.....Test Method for Bulk Density and Specific Gravity of Plastic Lumber and Shapes by Displacement

D6112-13.....Test Methods for Compressive and Flexural Creep and Creep-Rupture of Plastic Lumber and Shapes

F844-07a(R2013).....Washers, Steel, Plan (Flat) Unhardened for General Use

F1667-13.....Nails, Spikes, and Staples

G. American Wood Protection Association (AWPA):

AWPA Book of Standards

H. Commercial Item Description (CID):

A-A-55615.....Shield, Expansion (Wood Screw and Lag Bolt Self Threading Anchors)

I. Forest Stewardship Council (FSC):

FSC-STD-01-001(Ver. 4-0)FSC Principles and Criteria for Forest Stewardship

J. Military Specification (Mil. Spec.):

MIL-L-19140E.....Lumber and Plywood, Fire-Retardant Treated

K. Environmental Protection Agency (EPA):

40 CFR 59(2014).....National Volatile Organic Compound Emission Standards for Consumer and Commercial Products

L. Truss Plate Institute (TPI):

TPI-85.....Metal Plate Connected Wood Trusses

M. U.S. Department of Commerce Product Standard (PS)

PS 1-95.....Construction and Industrial Plywood

PS 20-10.....American Softwood Lumber Standard

N. ICC Evaluation Service (ICC ES):

AC09.....Quality Control of Wood Shakes and Shingles

AC174.....Deck Board Span Ratings and Guardrail Systems (Guards and Handrails)

PART 2 - PRODUCTS

2.1 LUMBER:

A. Unless otherwise specified, each piece of lumber must bear grade mark, stamp, or other identifying marks indicating grades of material, and rules or standards under which produced.

1. Identifying marks are to be in accordance with rule or standard under which material is produced, including requirements for qualifications and authority of the inspection organization, usage of authorized identification, and information included in the identification.
2. Inspection agency for lumber approved by the Board of Review, American Lumber Standards Committee, to grade species used.

B. Structural Members: Species and grade as listed in the AFPA NDS having design stresses as shown.

C. Lumber Other Than Structural:

1. Unless otherwise specified, species graded under the grading rules of an inspection agency approved by Board of Review, American Lumber Standards Committee.
2. Framing lumber: Minimum extreme fiber stress in bending of 7584 kPa (1100 PSI).
3. Furring, blocking, nailers and similar items 101 mm (4 inches) and narrower Standard Grade; and, members 152 mm (6 inches) and wider, Number 2 Grade.
4. Board Sub-flooring: Shiplap edge, 25 mm (1 inch) thick, not less than 203 mm (8 inches) wide.

D. Sizes:

1. Conforming to PS 20.

2. Size references are nominal sizes, unless otherwise specified, actual sizes within manufacturing tolerances allowed by standard under which produced.

E. Moisture Content:

1. Maximum moisture content of wood products is to be as follows at the time of delivery to site.
   a. Boards and lumber 50 mm (2 inches) and less in thickness: 19 percent or less.
   b. Lumber over 50 mm (2 inches) thick: 25 percent or less.

F. Fire Retardant Treatment:

1. Comply with Mil Spec. MIL-L-19140.
2. Treatment and performance inspection, by an independent and qualified testing agency that establishes performance ratings.

G. Preservative Treatment:

1. Do not treat Heart Redwood and Western Red Cedar.
2. Treat wood members and plywood exposed to weather or in contact with plaster, masonry or concrete, including framing of open roofed structures; sills, sole plates, furring, and sleepers that are less than 610 mm (24 inches) from ground; nailers, edge strips, blocking, crickets, curbs, cant, vent strips and other members provided in connection with roofing and flashing materials.
3. Treat other members specified as preservative treated (PT).
4. Preservative treat by the pressure method complying with AWPA Book use category system standards U1 and T1, except any process involving the use of Chromated Copper Arsenate (CCA) or other agents classified as carcinogenic for pressure treating wood is not permitted.

2.2 NOT USED

2.3 PLYWOOD:

A. Comply with PS 1.

B. Bear the mark of a recognized association or independent inspection agency that maintains continuing control over quality of plywood which identifies compliance by veneer grade, group number, span rating where applicable, and glue type.

C. Sheathing:

1. APA rated Exposure 1 or Exterior; panel grade CD or better.
2. Wall sheathing:

a. Minimum 9 mm (11/32 inch) thick with supports 406 mm (16 inches) on center and 12 mm (15/32 inch) thick with supports 610 mm (24 inches) on center unless specified otherwise.
b. Minimum 1200 mm (48 inches) wide at corners without corner bracing of framing.

3. Roof sheathing:
a. Minimum 9 mm (11/32 inch) thick with span rating 24/0 or 12 mm (15/32 inch) thick with span rating for supports 406 mm (16 inches) on center unless specified otherwise.
b. Minimum 15 mm (19/32 inch) thick or span rating of 40/20 or 18 mm (23/32 inch) thick or span rating of 48/24 for supports 610 mm (24 inches) on center.

2.4 NOT USED

2.5 ROUGH HARDWARE AND ADHESIVES:

A. Anchor Bolts:
1. ASME B18.2.1 and ASME B18.2.2 galvanized, 13 mm (1/2 inch) unless shown otherwise.
2. Extend at least 203 mm (8 inches) into masonry or concrete with ends bent 50 mm (2 inches).

B. Miscellaneous Bolts: Expansion Bolts: C1D A-A-55615; lag bolt, long enough to extend at least 65 mm (2-1/2 inches) into masonry or concrete. Provide 13 mm (1/2 inch) bolt unless shown otherwise.

C. Washers
1. ASTM F844.
2. Provide zinc or cadmium coated steel or cast iron for washers exposed to weather.

D. Screws:
1. Wood to Wood: ASME B18.6.1 or ASTM C1002.
2. Wood to Steel: ASTM C954, or ASTM C1002.

E. Nails:
1. Size and type best suited for purpose unless noted otherwise. Provide aluminum-alloy nails, plated nails, or zinc-coated nails, for nailing wood work exposed to weather and on roof blocking.
2. ASTM F1667:
a. Common: Type I, Style 10.
b. Concrete: Type I, Style 11.
c. Barbed: Type I, Style 26.
d. Underlayment: Type I, Style 25.

e. Masonry: Type I, Style 27.

f. Provide special nails designed for use with ties, strap anchors, framing connectors, joists hangers, and similar items. Nails not less than 32 mm (1-1/4 inches) long, 8d and deformed or annular ring shank.

F. Framing and Timber Connectors:

1. Fabricate of ASTM A653/A653M, Grade A; steel sheet not less than 1.3 mm (0.052 inch) thick unless specified otherwise. Apply standard plating to steel timber connectors after punching, forming and assembly of parts.

2. Framing Angles: Angle designed with bendable legs to provide three (3) way anchors.

3. Straps:

a. Designed to provide wind and seismic ties with sizes as shown or specified.

b. Strap ties not less than 32 mm (1-1/4 inches) wide.

c. Punched for fastener.

5. Joist Hangers:

a. Fabricated of 1.6 mm (0.063 inch) minimum thick sheet, U design unless shown otherwise.

b. Heavy duty hangers fabricated of minimum 2.7 mm (0.108 inch) thick sheet, U design with bent top flange to lap over beam.

6. Timber Connectors: Fabricated of steel to shapes indicated on contract drawings.

7. Joist Ties: Mild steel flats, 5 mm by 32 mm (3/16 inch by 1-1/4 inch) size with ends bent about 30 degrees from horizontal, and extending at least 406 mm (16 inches) onto framing. Punch each end for three (3) spikes.

8. Wall Anchors for Joists and Rafters:

a. Mild steel strap, 5 mm by 32 mm (3/16 inch by 1-1/4 inch) with wall ends bent 50 mm (2 inches), or provide 9 mm by 130 mm (3/8 inch by 5 inch) pin through strap end built into masonry.

b. Strap long enough to extend onto three joists or rafters, and punched for spiking at each bearing.

c. Strap not less than 101 mm (4 inches) embedded end.

9. Joint Plates:

a. Steel plate punched for nails.

b. Steel plates formed with teeth or prongs for mechanically clamping plates to wood.

c. Size for axial eccentricity, and fastener loads.

G. Adhesives:

1. For field-gluing plywood to lumber framing floor or roof systems: ASTM D3498.

2. For structural laminated Wood: ASTM D2559.

PART 3 - EXECUTION

3.1 INSTALLATION OF FRAMING AND MISCELLANEOUS WOOD MEMBERS:

A. Conform to applicable requirements of the following:

1. AFPA NDS for timber connectors.

2. AITC A190.1 Timber Construction Manual for heavy timber construction.

3. AFPA WCD1 for nailing and framing unless specified otherwise.

4. APA for installation of plywood or structural use panels.

5. TPI for metal plate connected wood trusses.

B. Fasteners:

1. Nails.

a. Nail in accordance with the Recommended Nailing Schedule as specified in AFPA WCD1 where detailed nailing requirements are not specified in nailing schedule. Select nail size and nail spacing sufficient to develop adequate strength for the connection without splitting the members.

b. Use special nails with framing connectors.

c. For sheathing and subflooring, select length of nails sufficient to extend 25 mm (1 inch) into supports.

d. Use 8d or larger nails for nailing through 25 mm (1 inch) thick lumber and for toe nailing 50 mm (2 inch) thick lumber.

e. Use 16d or larger nails for nailing through 50 mm (2 inch) thick lumber.

f. Select the size and number of nails in accordance with the Nailing Schedule except for special nails with framing anchors.

g. Nailing Schedule; Using Common Nails:

1) Joist bearing on sill or girder, toe nail three (3) 8d nails or framing anchor.

2) Bridging to joist, toe nail each end two (2) 8d nails.

3) Ledger strip to beam or girder three (3) 16d nails under each joint.

5) Sole plate to joist or blocking, through sub floor face nail 20d nails, 406 mm (16 inches) on center.
6) Top plate to stud, end nail two (2) 16d nails.
7) Stud to sole plate, toe nail or framing anchor. Four (4) 8d nails.
8) Doubled studs, face nail 16d at 610 mm (24 inches) on center.
9) Built-up corner studs 16d at 610 mm (24 inches) (24 inches) on center.
10) Doubled top plates, face nails 16d at 406 mm (16 inches) on center.
11) Top plates, laps, and intersections, face nail two (2) 16d.
12) Continuous header, two pieces 16d at 406 mm (16 inches) on center along each edge.
13) Ceiling joists to plate, toenail three (3) 8d or framing anchor.
14) Continuous header to stud, four (4) 16d.
15) Ceiling joists, laps over partitions, face nail three (3) 16d or framing anchor.
16) Ceiling joists, to parallel rafters, face nail three (3) 16d.
17) Rafter to plate, toe nail three (3) 8d or framing anchor. Brace 25 mm (1 inch) thick board to each stud and plate, face nail three (3) 8d.
18) Built-up girders and beams 20d at 812 mm (32 inches) on center along each edge.

2. Bolts:
   a. Fit bolt heads and nuts bearing on wood with washers.
   b. Countersink bolt heads flush with the surface of nailers.
   c. Embed in concrete and solid masonry or provide expansion bolts. Special bolts or screws designed for anchor to solid masonry or concrete in drilled holes may be used.
   d. Provide toggle bolts to hollow masonry or sheet metal.
   e. Provide bolts to steel over 2.84 mm (0.112 inch, 11 gage) in thickness. Secure wood nailers to vertical structural steel members with bolts, placed one at ends of nailer and 610 mm (24 inch) intervals between end bolts. Provide clips to beam flanges.
3. Drill Screws to steel less than 2.84 mm (0.112 inch) thick.
   a. ASTM C1002 for steel less than 0.84 mm (0.033 inch) thick.

b. ASTM C954 for steel over 0.84 mm (0.033 inch) thick.

4. Power actuated drive pins may be provided where practical to anchor to solid masonry, concrete, or steel.
5. Do not anchor to wood plugs or nailing blocks in masonry or concrete. Provide metal plugs, inserts or similar fastening.
6. Screws to Join Wood:
   a. Where shown or option to nails.
   b. ASTM C1002, sized to provide not less than 25 mm (1 inch) penetration into anchorage member.
   c. Spaced same as nails.
7. Installation of Timber Connectors:
   a. Conform to applicable requirements of the AFPA NDS.
   b. Fit wood to connectors and drill holes for fasteners so wood is not split.

C. Set sills or plates level in full bed of mortar on masonry or concrete walls.
   1. Space anchor bolts 1219 mm (4 feet) on centers between ends and within 152 mm (6 inches) of end. Stagger bolts from side to side on plates over 178 mm (7 inches) in width.
   2. Provide shims of slate, tile or similar approved material to level wood members resting on concrete or masonry. Do not use wood shims or wedges.
   3. Closely fit, and set to required lines.

D. Cut notch, or bore in accordance with AFPA WCD1 passage of ducts wires, bolts, pipes, conduits and to accommodate other work. Repair or replace miscut, misfit or damaged work.

E. Blocking Nailers, and Furring:
   1. Install furring, blocking, nailers, and grounds where shown.
   2. Provide longest lengths practicable.
   3. Provide fire retardant treated wood blocking where shown at openings and where shown or specified.
   4. Layers of Blocking or Plates:
      a. Stagger end joints between upper and lower pieces.
      b. Nail at ends and not over 610 mm (24 inches) between ends.
      c. Stagger nails from side to side of wood member over 127 mm (5 inches) in width.

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SECTION 08 11 13
HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 DESCRIPTION

A. This section specifies steel doors, steel frames and related components.

B. Terms relating to steel doors and frames as defined in ANSI A123.1 and as specified.

1.2 RELATED WORK

A. Door Hardware: Section 08 71 00, DOOR HARDWARE.

1.3 TESTING

An independent testing laboratory shall perform testing. Contractor shall bear the cost for the independent testing laboratory.

1.4 SUBMITTALS

A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.

B. Manufacturers Literature and Data:

1. Fire rated doors and frames, showing conformance with NFPA 80 and Underwriters Laboratory, Inc., or Intertek Testing Services or Factory Mutual fire rating requirements.
2. Sound rated doors, including test report from Testing Laboratory.

1.5 SHIPMENT

A. Prior to shipment label each door and frame to show location, size, door swing and other pertinent information.

B. Fasten temporary steel spreaders across the bottom of each door frame.

1.6 STORAGE AND HANDLING

A. Store doors and frames at the site under cover.

B. Protect from rust and damage during storage and erection until completion.

1.7 APPLICABLE PUBLICATIONS

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

B. Federal Specifications (Fed. Spec.):

L-S-125B.....Screening, Insect, Nonmetallic

C. Door and Hardware Institute (DHI):

A115 Series.....Steel Door and Frame Preparation for Hardware, Series A115.1 through A115.17 (Dates Vary)

D. Steel Door Institute (SDI):

113-01 (R2006).....Thermal Transmittance of Steel Door and Frame Assemblies

128-09.....Acoustical Performance for Steel Door and Frame Assemblies

E. American National Standard Institute:

A250.8-2003 (R2008).....Specifications for Standard Steel Doors and Frames

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

A167-99(R2009).....Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip

A568/568-M-11.....Steel, Sheet, Carbon, and High-Strength, Low-alloy, Hot-Rolled and Cold-Rolled

A1008-10.....Steel, sheet, Cold-Rolled, Carbon, Structural, High Strength Low Alloy and High Strength Low Alloy with Improved Formability

B209/209M-10.....Aluminum and Aluminum-Alloy Sheet and Plate

B221/221M-12.....Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles and Tubes

D1621-10.....Compressive Properties of Rigid Cellular Plastics

D3656-07.....Insect Screening and Louver Cloth Woven from Vinyl Coated Glass Yarns

E90-09.....Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions

G. The National Association Architectural Metal Manufactures (NAAMM):

Metal Finishes Manual (AMP 500-06)

H. National Fire Protection Association (NFPA):

80-13.....Fire Doors and Fire Windows

I. Underwriters Laboratories, Inc. (UL):

Fire Resistance Directory

J. Intertek Testing Services (ITS):

Certifications Listings…Latest Edition

K. Factory Mutual System (FM):

Approval Guide

PART 2 - PRODUCTS

2.1 MATERIALS

A. Stainless Steel: ASTM A167, Type 302 or 304; finish, NAAMM Number 4.

B. Sheet Steel: ASTM A1008, cold-rolled for panels (face sheets) of doors.

C. Anchors, Fastenings and Accessories: Fastenings anchors, clips connecting members and sleeves from zinc coated steel.

2.2 FABRICATION GENERAL

A. GENERAL:

1. Follow ANSI A250.8 for fabrication of standard steel doors, except as specified otherwise. Doors to receive hardware specified in Section 08 71 00, DOOR HARDWARE. Tolerances as per ANSI A250.8. Thickness, 44 mm (1-3/4 inches), unless otherwise shown.
2. Close top edge of exterior doors flush and seal to prevent water intrusion.
3. When vertical steel stiffeners are used for core construction, fill spaces between stiffeners with mineral fiber insulation.

B. Fire Rated Doors (Labeled):

1. Conform to NFPA 80 when tested by Underwriters Laboratories, Inc., Inchcape Testing Services, or Factory Mutual for the class of door or door opening shown.
2. Fire rated labels of metal, with raised or incised markings of approving laboratory shall be permanently attached to doors.
3. Close top and vertical edges of doors flush. Vertical edges shall be seamless. Apply steel astragal to the meeting stile of the active leaf of pairs of fire rated doors, except where vertical rod exit devices are specified for both leaves swinging in the same direction.

C. Sound Rated Doors:

1. SDI 114, except as specified otherwise.
2. Sound Transmission Class minimum of 45 when tested in accordance with ASTM E90.
3. Doors complete with integral spring type automatic door bottom seal and with integral continuous gaskets on the frames. Applied spring type automatic door bottom seal and applied continuous gaskets for the frames for doors that are not sound rated but sealed for flanking noises are specified in Section 08 71 00, DOOR HARDWARE.

2.3 METAL FRAMES

A. General:

1. ANSI A250.8, 1.3 mm (0.053 inch) thick sheet steel, types and styles as shown or scheduled.

2. Frames for labeled fire rated doors
   a. Comply with NFPA 80. Test by Underwriters Laboratories, Inc., Inchcape Testing Services, or Factory Mutual.
   b. Fire rated labels of approving laboratory permanently attached to frames as evidence of conformance with these requirements. Provide labels of metal or engraved stamp, with raised or incised markings.
3. Knocked-down frames are not acceptable.

B. Reinforcement and Covers:
1. ANSI A250.8 for, minimum thickness of steel reinforcement welded to back of frames.
2. Provide mortar guards securely fastened to back of hardware reinforcements except on lead-lined frames.
3. Where concealed door closers are installed within the head of the door frames at corridor doors, prepare frames for closers and provide 1 mm (0.042 inch) thick steel removable stop sections for access to concealed face plates and control valves, except when cover plates are furnished with closer.

C. Frame Anchors:
1. Floor anchors:
   a. Where floor fills occur, provide extension type floor anchors to compensate for depth of fill.
   b. At bottom of jamb use 1.3 mm (0.053 inch) thick steel clip angles welded to jamb and drilled to receive two 6 mm (1/4 inch) floor bolts. Use 50 mm x 50 mm (2 inch by 2 inch) 9 mm by (3/8 inch) clip angle for lead lined frames, drilled for 9 mm (3/8 inch) floor bolts.
   c. Where mullions occur, provide 2.3 mm (0.093 inch) thick steel channel anchors, drilled for two 6 mm (1/4 inch) floor bolts and frame anchor screws.
   d. Where sill sections occur, provide continuous 1 mm (0.042 inch) thick steel rough bucks drilled for 6 mm (1/4 inch) floor bolts and frame anchor screws. Space floor bolts at 50 mm (24 inches) on center.
2. Jamb anchors:
   a. Locate anchors on jambs near top and bottom of each frame, and at intermediate points not over 600 mm (24 inches) apart, except for

fire rated frames space anchors as required by labeling authority.

b. Form jamb anchors of not less than 1 mm (0.042 inch) thick steel unless otherwise specified.

c. Anchors set in masonry: Use adjustable anchors designed for friction fit against the frame and for extension into the masonry not less than 250 mm (10 inches). Use one of following type:
   1) Wire loop type of 5 mm (3/16 inch) diameter wire.
   2) T-shape or strap and stirrup type of corrugated or perforated sheet steel.

d. Anchors for stud partitions: Either weld to frame or use lock-in snap-in type. Provide tabs for securing anchor to the sides of the studs.

e. Anchors for frames set in prepared openings:
   1) Steel pipe spacers with 6 mm (1/4 inch) inside diameter welded to plate reinforcing at jamb stops or hat shaped formed strap spacers, 50 mm (2 inches) wide, welded to jamb near stop.
   2) Drill jamb stop and strap spacers for 6 mm (1/4 inch) flat head bolts to pass thru frame and spacers.
   3) Two piece frames: Subframe or rough buck drilled for 6 mm (1/4 inch) bolts.

f. Anchors for observation windows and other continuous frames set in stud partitions.
   1) In addition to jamb anchors, weld clip anchors to sills and heads of continuous frames over 1200 mm (4 feet) long.
   2) Anchors spaced 600 mm (24 inches) on centers maximum.

g. Modify frame anchors to fit special frame and wall construction and provide special anchors where shown or required.

2.4 NOT USED

2.5 NOT USED

2.6 SHOP PAINTING ANSI A250.8.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Plumb, align and brace frames securely until permanent anchors are set.
   1. Use triangular bracing near each corner on both sides of frames with temporary wood spreaders at midpoint.
   2. Use wood spreaders at bottom of frame if the shipping spreader is removed.

3. Protect frame from accidental abuse.
4. Where construction will permit concealment, leave the shipping spreaders in place after installation, otherwise remove the spreaders after the frames are set and anchored.
5. Remove wood spreaders and braces only after the walls are built and jamb anchors are secured.

B. Floor Anchors:
1. Anchor the bottom of door frames to floor with two 6 mm (1/4 inch) diameter expansion bolts. Use 9 mm (3/8 inch) bolts on lead lined frames.
2. Power actuated drive pins may be used to secure frame anchors to concrete floors. Coordinate power actuated use with VA Project Engineer (COTR) prior to use in occupied spaces. This work is required to be performed during off hours.

C. Jamb Anchors:
1. Anchors in masonry walls: Embed anchors in mortar. Fill space between frame and masonry wall with grout or mortar as walls are built.
2. Coat frame back with a bituminous coating prior to lining of grout filling in masonry walls.
3. Secure anchors to sides of studs with two fasteners through anchor tabs. Use steel drill screws to steel studs.
4. Frames set in prepared openings of masonry or concrete: Expansion bolt to wall with 6 mm (1/4 inch) expansion bolts through spacers. Where subframes or rough bucks are used, 6 mm (1/4 inch) expansion bolts on 600 mm (24 inch) centers or power activated drive pins 600 mm (24 inches) on centers. Secure two piece frames to subframe or rough buck with machine screws on both faces.

D. Install anchors for labeled fire rated doors to provide rating as required.

E. Frames for Sound Rated Doors: Coordinate to line frames for sound rated doors with insulation.

3.2 INSTALLATION OF DOORS AND APPLICATION OF HARDWARE

Install doors and hardware as specified in Sections Section 08 11 13, HOLLOW METAL DOORS AND FRAMES Section 08 14 00, WOOD DOORS Section 08 71 00, DOOR HARDWARE.

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SECTION 08 14 00
INTERIOR WOOD DOORS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Interior flush wood doors painted finish.
    a. Fire rated doors.
    b. Smoke rated doors.
    c. Acoustical doors.
    d. Dutch doors.
2. Interior stile and rail wood doors painted finish.

1.2 RELATED REQUIREMENTS

A. Paints and Coatings and Composite Wood and Agrifiber VOC Limits: Section 01 81 13, SUSTAINABLE CONSTRUCTION REQUIREMENTS.

B. Door Hardware including hardware location (height): Section 08 71 00, DOOR HARDWARE.

C. Door Finish: Section 09 06 00, SCHEDULE FOR FINISHES.

1.3 APPLICABLE PUBLICATIONS

A. Comply with references to extent specified in this section.

B. American National Standards Institute/Window and Door Manufacturers Association (ANSI/WDMA):

1. I.S. 1A-13 - Architectural Wood Flush Doors.
2. I.S. 6A-13 - Interior Architectural Stile and Rails Doors.

C. ASTM International (ASTM):

1. E90-09 - Laboratory Measurements of Airborne Sound Transmission Loss of Building Partitions and Elements.

D. National Fire Protection Association (NFPA):

1. 80-16 - Fire Doors and Other Opening Protectives.
2. 252-12 - Fire Tests of Door Assemblies.

E. UL LLC (UL):

1. 10C-09 - Positive Pressure Fire Tests of Door Assemblies.

F. Window and Door Manufacturers Association (WDMA):

1. TM 7-14 - Cycle-Slam Test.
2. TM 8-14 - Hinge Loading Test.
3. TM 10-14 - Screw Holding Capacity.

1.4 SUBMITTALS

A. Submittal Procedures: Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.

B. Submittal Drawings:

1. Show size, configuration, and fabrication and installation details.
2. Indicate project specific requirements not included in Manufacturer's Literature and Data submittal.

C. Manufacturer's Literature and Data:

1. Description of each product.
2. Fire rated doors showing conformance with NFPA 252.

D. Sustainable Construction Submittals:

1. Low Pollutant-Emitting Materials:
   a. Show volatile organic compound types and quantities.

E. Test Reports: Indicate products comply with specifications.

1. Screw Holding Capacity Test.
2. Cycle-Slam Test.
3. Hinge-Loading Test.

F. Operation and Maintenance Data:

1. Care instructions for each exposed finish product.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications:

1. Regularly and presently manufactures specified products.
2. Manufactures specified products with satisfactory service on five similar installations for minimum five years.

1.6 DELIVERY

A. Deliver products in manufacturer's original sealed packaging.

1. Minimum 0.15 mm (6 mil) polyethylene bags or cardboard packaging to remain unbroken during delivery and storage.

B. Mark packaging, legibly. Indicate manufacturer's name or brand, type, color, and manufacture date.

1. Identify door opening corresponding to Door Schedule.

C. Before installation, return or dispose of products within distorted, damaged, or opened packaging.

1.7 STORAGE AND HANDLING

A. Store products indoors in dry, weathertight facility.

1. Store doors according to ANSI/WDMA I.S. 1A.

B. Protect products from damage during handling and construction operations.

1.8 FIELD CONDITIONS

A. Environment:

1. Product Temperature: Minimum 21 degrees C (70 degrees F) for minimum 48 hours before installation.
2. Work Area Ambient Temperature Range: 21 to 27 degrees C (70 to 80 degrees F) continuously, beginning 48 hours before installation.
3. Install products when building is permanently enclosed and when wet construction is completed, dried, and cured.
   a. Comply with door manufacturer's instructions for relative humidity.

1.9 WARRANTY

A. Manufacturer's Warranty: Warrant interior factory finished, flush, stile and rail, wood doors against material and manufacturing defects.

1. Warranty Period: Lifetime of original installation.

PART 2 - PRODUCTS

2.1 PRODUCTS - GENERAL

A. Basis of Design: Section 09 06 00, SCHEDULE FOR FINISHES.

B. Provide each product from one manufacturer.

C. Sustainable Construction Requirements:

1. Low Pollutant-Emitting Materials: Comply with VOC limits specified in Section 01 81 13, SUSTAINABLE CONSTRUCTION REQUIREMENTS for the following products:
   a. Paints and coatings.
   b. Composite wood and agrifiber.

2.2 FLUSH WOOD DOORS

A. General:

1. ANSI/WDMA I.S. 1A, Extra Heavy Duty.
2. Adhesive: Type II.
3. Core: Structural composite lumber, except when mineral core is required for fire rating.
4. Thickness: 44 mm (1-3/4 inches)

B. Faces:

1. ANSI/WDMA I.S. 1A.
2. One species throughout project unless scheduled or otherwise shown.

3. Transparent Finished Faces: Premium Grade, rotary cut, red oak
    a. A Grade face veneer.
    b. Match face veneers for doors for uniform effect of color and grain at joints.
    c. Door Edges: Same species as door face veneer, except maple is acceptable for stile face veneer on birch doors.
    d. In existing buildings, where doors are required to have transparent finish, use wood species, grade, and assembly of face veneers to match adjacent existing doors.
4. Painted Finishes: Custom Grade, mill option close grained hardwood, premium or medium density overlay.
5. Factory sand doors for finishing.

C. Fire-Rated Wood Doors:
1. Fire Resistance Rating:
    a. B Label: 1-1/2 hours.
    b. C Label: 3/4 hour.
2. Labels:
    a. Comply with NFPA 252, UL 10C, and labeled by qualified testing and inspection agency showing fire resistance rating.
    b. Metal labels with raised or incised markings.
3. Performance Criteria for Stiles of Doors Utilizing Standard Mortise Leaf Hinges:
    a. Hinge Loading: WDMA TM 8. Average of 10 test samples for Extra Heavy Duty doors.
    b. Direct Screw Withdrawal: WDMA TM 10 for Extra Heavy Duty doors. Average of 10 test samples using a steel, fully threaded #12 wood screw.
    c. Cycle-Slam: 1,000,000 cycles with no loose hinge screws or other visible signs of failure when tested according to WDMA TM 7.
4. Hardware Reinforcement:
    a. Provide fire rated doors with hardware reinforcement blocking.
    b. Size of lock blocks as required to secure hardware specified.
    c. Top, Bottom and Intermediate Rail Blocks: Minimum 125 mm (5 inches) by full core width.
    d. Reinforcement blocking in compliance with labeling requirements.
    e. Mineral material similar to core is not acceptable.
5. Other Core Components: Manufacturer's standard as allowed by labeling requirements.

D. Sound Rated Doors:
   1. Fabricated as specified for flush wood doors with additional construction requirements to comply with specified sound transmission class (STC).
   2. STC Rating of door assembly in place when tested according to ASTM E90 by independent acoustical testing laboratory minimum 45.
   3. Accessories:
      a. Frame Gaskets and Automatic Door Bottom Seal: As specified in Section 08 71 00, DOOR HARDWARE.

2.3 NOT USED

2.4 FABRICATION

A. Factory machine interior wood doors to receive hardware, bevels, undercuts, cutouts, accessories and fitting for frame.
   1. Factory fit fire rated doors according to NFPA 80.
B. Rout doors for hardware using templates and location heights specified in Section 08 71 00, DOOR HARDWARE.
C. Factory fit doors to frame, bevel lock edge of doors 3 mm (1/8 inch) for each 50 mm (2 inches) of door thickness undercut where shown.
D. Clearances between Doors and Frames and Floors:
   1. Fire Rated Doors: Comply with NFPA 80.
      a. Doors with Automatic Bottom Seal: Maximum clearance 10 mm (3/8 inch) at threshold.
      b. Other Door Bottoms: Maximum 3 mm (1/8 inch) clearance at the jambs, heads, and meeting stiles, and a 19 mm (3/4 inch) clearance at bottom, except as otherwise specified.
   2. Door Jambs, Heads, and Meeting Stiles: Maximum 3 mm (1/8 inch).
E. Provide cutouts for openings.
F. Finish surfaces, including both faces, top and bottom and edges of the doors smooth to touch.
G. Identify each door on top edge.
   1. Mark with stamp, brand or other indelible mark, giving manufacturer’s name, door’s trade name, construction of door, date of manufacture and quality.
   2. Mark door or provide separate certification including name of inspection organization.
   3. Identify door manufacturing standard, including glue type.
   4. Identify veneer and quality certification.

5. Identification of preservative treatment for stile and rail doors.

2.5 FINISHES

A. Field Finished Doors: Seal top and bottom edges of doors with two coats of catalyzed polyurethane or water resistant sealer.

B. Factory Transparent Finish:

1. Factory finish flush wood doors.

a. ANSI/WDMA I.S. 1A Section F-3 Finish System Descriptions for System 5, Conversion Varnish or System 7, Catalyzed Vinyl.

b. Use stain when required to produce finish specified in Section 09 06 00, SCHEDULE FOR FINISHES.

PART 3 - EXECUTION

3.1 PREPARATION

A. Examine and verify substrate suitability for product installation.

1. Verify door frames are properly anchored.

2. Verify door frames are plumb, square, in plane, and within tolerances for door installation.

B. Protect existing construction and completed work from damage.

C. Install astragal on active leaf of pair of smoke doors and one leaf of double egress smoke doors.

3.2 INSTALLATION

A. Install products according to manufacturer's instructions

1. Install fire rated doors according to NFPA 80.

2. When manufacturer's instructions deviate from specifications, submit proposed resolution for Contracting Officer's Representative consideration.

3.3 PROTECTION

A. After installation, place shipping container over door and tape in place.

1. Do not apply tape to door faces and edges.

B. Provide protective covering over exposed hardware in addition to covering door.

C. Maintain covering in good condition until removal is directed by Contracting Officer's Representative.

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SECTION 08 71 00
DOOR HARDWARE

PART 1 - GENERAL

1.1 DESCRIPTION

A. Door hardware and related items necessary for complete installation and operation of doors.

1.2 RELATED WORK

A. Caulking: Section 07 92 00 JOINT SEALANTS.

B. Application of Hardware: Section 08 14 00, WOOD DOORS, Section 08 11 13, HOLLOW METAL DOORS AND FRAMES,

1.3 GENERAL

A. All hardware shall comply with UFAS, (Uniform Federal Accessible Standards) unless specified otherwise.

B. Provide rated door hardware assemblies where required by most current version of the International Building Code (IBC).

C. Hardware for Labeled Fire Doors and Exit Doors: Conform to requirements of NFPA 80 for labeled fire doors, as well as to other requirements specified. Provide hardware listed by UL, except where heavier materials, large size, or better grades are specified herein under paragraph HARDWARE SETS. In lieu of UL labeling and listing, test reports from a nationally recognized testing agency may be submitted showing that hardware has been tested in accordance with UL test methods and that it conforms to NFPA requirements.

D. Hardware for application on metal and wood doors and frames shall be made to standard templates. Furnish templates to the fabricator of these items in sufficient time so as not to delay the construction.

E. The following items shall be of the same manufacturer, except as otherwise specified:

1. Mortise locksets.
2. Hinges for hollow metal and wood doors.
3. Surface applied overhead door closers.
4. Exit devices.
5. Floor closers.

1.4 WARRANTY

1. Locks, latchsets, and panic hardware: 5 years.
2. Door closers and continuous hinges: 10 years.

1.5 MAINTENANCE MANUALS

A. In accordance with Section 01 00 00, GENERAL REQUIREMENTS Article titled "INSTRUCTIONS", furnish maintenance manuals and instructions on all door hardware. Provide installation instructions with the submittal documentation.

1.6 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES. Submit 6 copies of the schedule per Section 01 33 23. Submit 2 final copies of the final approved schedules to VAMC Locksmith and Project Engineer (COTR) as record copies.

B. Hardware Schedule: Prepare and submit hardware schedule in the following form:

Hardware Item	Quantity	Size	Reference Publication Type No.	Finish	Mfr. Name and Catalog No.	Key Control Symbols	UL Mark (if fire rated and listed)	ANSI/BHMA Finish Designation

C. Samples and Manufacturers' Literature:

1. Samples: All hardware items (proposed for the project) that have not been previously approved by Builders Hardware Manufacturers Association shall be submitted for approval. Tag and mark all items with manufacturer's name, catalog number and project number.
2. Samples are not required for hardware listed in the specifications by manufacturer's catalog number, if the contractor proposes to use the manufacturer's product specified.

D. Certificate of Compliance and Test Reports: Submit certificates that hardware conforms to the requirements specified herein. Certificates shall be accompanied by copies of reports as referenced. The testing shall have been conducted either in the manufacturer's plant and certified by an independent testing laboratory or conducted in an independent laboratory, within four years of submittal of reports for approval.

1.7 DELIVERY AND MARKING

A. Deliver items of hardware to job site in their original containers, complete with necessary appurtenances including screws, keys, and instructions. Tag one of each different item of hardware and deliver to Resident Engineer for reference purposes. Tag shall identify items by Project Specification number and manufacturer's catalog number. These items shall remain on file in Resident Engineer's office until all other similar items have been installed in project, at which time the Resident Engineer will deliver items on file to Contractor for installation in predetermined locations on the project.

1.8 PREINSTALLATION MEETING

A. Convene a pre-installation meeting not less than 30 days before start of installation of door hardware. Require attendance of parties directly affecting work of this section, including Contractor and Installer, Project Engineer and VA Locksmith and Hardware Manufacturer’s Representative. Review the following:

1. Inspection of door hardware.
2. Job and surface readiness.
3. Coordination with other work.
4. Protection of hardware surfaces.
5. Substrate surface protection.
6. Installation.
7. Adjusting.
8. Repair.
9. Field quality control.
10. Cleaning.

1.9 INSTRUCTIONS

A. Keying: VHA BHS Brockton division uses removable interchangeable cores, BEST, 7 pin combination to ‘TE’ keyways. The contractor shall bear the cost to have cores combinated; coordinate with VA Project Engineer (COTR) and VA Locksmith for the correct part number(s) for ordering cores for Brockton Facility from STANLEY SECURITY SOLUUTIONS. Combinated cores shall ship directly to VA Locksmith. Door hardware including lever to match facility standards, manufactured by Schlage. Schlage mortise locks, L/90 series. Door shall be non-locking; inside the exam room shall have a lock throw to unlock.

1.10 APPLICABLE PUBLICATIONS

A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only. In text, hardware items are referred to by series, types, etc., listed in such specifications and standards, except as otherwise specified.

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

F883-04.....Padlocks

E2180-07.....Standard Test Method for Determining the Activity of Incorporated Antimicrobial Agent(s) In Polymeric or Hydrophobic Materials

C. American National Standards Institute/Builders Hardware Manufacturers Association (ANSI/BHMA):

A156.1-06.....Butts and Hinges

A156.4-08.....Door Controls (Closers)

A156.5-14.....Cylinders and Input Devices for Locks.

A156.6-05.....Architectural Door Trim

A156.8-05.....Door Controls-Overhead Stops and Holders

A156.12-05 .....Interconnected Locks and Latches

A156.13-05.....Mortise Locks and Latches Series 1000

A156.17-04 .....Self-Closing Hinges and Pivots

A156.18-06.....Materials and Finishes

A156.21-09.....Thresholds

A156.22-05.....Door Gasketing and Edge Seal Systems

A156.28-07 .....Master Keying Systems

A250.8-03.....Standard Steel Doors and Frames

D. National Fire Protection Association (NFPA):

80-10.....Fire Doors and Other Opening Protectives

101-09.....Life Safety Code

E. Underwriters Laboratories, Inc. (UL):

Building Materials Directory (2008)

PART 2 - PRODUCTS

2.1 CONTINUOUS HINGES

A. ANSI/BHMA A156.26, Grade 1-600.

1. Listed under Category N in BHMA's "Certified Product Directory."

B. General: Minimum 0.120-inch- (3.0-mm-) thick, hinge leaves with minimum overall width of 4 inches (102 mm); fabricated to full height of door and frame and to template screw locations; with components finished after milling and drilling are complete.

C. Continuous, Barrel-Type Hinges: Hinge with knuckles formed around a Teflon-coated 6.35mm (0.25-inch) minimum diameter pin that extends entire length of hinge.

1. Base Metal for Interior Hinges: Stainless steel.
2. Base Metal for Hinges for Fire-Rated Assemblies: Stainless steel
3. Provide with non-removable pin (hospital tip).
4. Where required to clear adjacent casing, trim, and wall conditions and allow full door swing, provide wide throw hinges of minimum width required.
5. Where models are specified that provide an integral wrap-around edge guard for the hinge edge of the door, provide manufacturer’s adjustable threaded stud and machine screw mechanism to allow the door to be adjusted within the wrap-around edge guard.

2.2 DOOR CLOSING DEVICES

A. Brockton standard to use is Norton 1603BC Tri-Style Aluminum Storefront Closer or equal. Aluminum Finish 689

2.3 OVERHEAD CLOSERS

A. Conform to ANSI/BHMA A156.4, Grade 1.

B. Closers shall conform to the following:

1. The closer shall have minimum 50 percent adjustable closing force over minimum value for that closer and have adjustable hydraulic back check effective between 60 degrees and 85 degrees of door opening.
2. Size Requirements: Provide multi-size closers, sizes 1 through 6, except where multi-size closer is not available for the required application.
3. Material of closer body shall be forged or cast.
4. Arm and brackets for closers shall be steel, malleable iron or high strength ductile cast iron.
5. Closers shall have full size metal cover; plastic covers will not be accepted.
6. Closers shall have adjustable hydraulic back-check, separate valves for closing and latching speed, adjustable back-check positioning valve, and adjustable delayed action valve.

7. Provide closers with any accessories required for the mounting application, including (but not limited to) drop plates, special soffit plates, spacers for heavy-duty parallel arm fifth screws, bull-nose or other regular arm brackets, longer or shorter arm assemblies, and special factory templating. Provide special arms, drop plates, and templating as needed to allow mounting at doors with overhead stops and/or holders.
8. Closer arms or backcheck valve shall not be used to stop the door from overswing, except in applications where a separate wall, floor, or overhead stop cannot be used.
9. Provide parallel arm closers with heavy duty rigid arm.
10. Where closers are to be installed on the push side of the door, provide parallel arm type except where conditions require use of top jamb arm.
11. Provide all surface closers with the same body attachment screw pattern for ease of replacement and maintenance.
12. All closers shall have a 1 ½″ (38mm) minimum piston diameter.

2.4 DOOR STOPS

A. Conform to ANSI A156.16.
B. Provide door stops wherever an opened door or any item of hardware thereon would strike a wall, column, equipment or other parts of building construction. For concrete, masonry or quarry tile construction, use lead expansion shields for mounting door stops.
C. Provide floor stops Type L02141 or L02161. Floor stops, where used, must be installed within 4-inches of the wall face and impact the door within the leading half of its width.
D. Where drywall partitions occur, use floor stops, Type L02141 or L02161.
E. Where the specified floor stop cannot be used, provide concealed overhead stops (surface-mounted where concealed cannot be used).

2.5 OVERHEAD DOOR STOPS AND HOLDERS

A. Conform to ANSI Standard A156.8. Overhead holders shall be of sizes recommended by holder manufacturer for each width of door. Set overhead holders for 110 degree opening, unless limited by building construction or equipment. Provide Grade 1 overhead concealed slide type: stop-only at rated doors.

2.6 LOCKS AND LATCHES

A. Conform to ANSI A156.2. Cylinders shall be furnished with construction removable cores and construction master keys. VHA BHS Brockton division uses removable interchangeable cores, BEST, 7 pin combinated ‘TE’ keyways. The contractor shall bear the cost to have cores combinated; coordinate with VA COR and VA Locksmith for the correct part number(s) for ordering cores for Brockton Facility from STANLEY SECURITY SOLUUTIONS. Combinated cores shall ship directly to VA Locksmith. Provide temporary keying device or construction core to allow opening and closing during construction and prior to the installation of final cores.

B. In addition to above requirements, locks and latches shall comply with following requirements:

1. Mortise Lock and Latch Sets: Conform to ANSI/BHMA A156.13. Mortise locksets shall be Schlage and match Brockton facility standard. All locksets and latchsets shall have lever handles fabricated from cast stainless steel. No substitute lever material shall be accepted. All locks and latchsets shall be furnished with 122.55 mm (4-7/8-inch) curved lip strike and wrought box. At outswing pairs with overlapping astragals, provide flat lip strip with 21mm (7/8-inch) lip-to-center dimension. Furnish armored fronts for all mortise locks.
2. Cylindrical Lock and Latch Sets: levers shall meet ADA (Americans with Disabilities Act) requirements. Cylindrical locksets shall be series 4000 Grade I. All locks and latchsets shall be furnished with 122.55 mm (4-7/8-inch) curved lip strike and wrought box. At outswing pairs with overlapping astragals, provide flat lip strip with 21mm (7/8-inch) lip-to-center dimension. Provide lever design to match existing levers at adjacent exam rooms.
3. Locks shall conform to Storeroom lock which latch bolt retracted by key outside or by knob/lever inside. Outside knob/lever is always inoperative. Auxiliary latch deadlocks latch bolt when door is closed. Inside lever is always free for immediate egress.

2.10 NOT USED

2.11 NOT USED

2.12 NOT USED

2.13 KEYS

A. Stamp all keys with change number and key set symbol. Furnish keys in quantities as follows:

Locks/Keys	Quantity
Cylinder locks	2 keys each

2.14 KEY CABINET (MODULAR CLINIC FURNITURE CABINETS)

A. ANSI Standard A156.11. Provide key cabinet made of cold rolled, 1.2 mm (0.0478 inch) thick furniture steel electro-welded. Key Cabinet and Key Control System shall accommodate all keys for this project plus 25 percent.

B. Key tags shall consist of Permanent self-locking type approximately 32 mm (1-1/4 inch) in diameter engraved with the legend "PRIMARY CARE"

C. The manufacturer of the lock cylinders and locks shall attach a key tag to keys of each lock cylinder and shall mark thereon the respective item number and key change number. Provide each group of keys in a key gathering envelope (supplied by Key Cabinet Manufacturer) in which the lock manufacturer shall include the following information: Item number, key change number and door number. The contractor shall furnish the Key Cabinet Manufacturer the hardware and keying schedules and change keys.

D. The Key Cabinet Manufacturer shall set up a three-way cross index system, including master keys, listing the keys alphabetically, the hooks numerically and the key changes numerically on different colored index cards. Index cards shall be typewritten and inserted in a durable binder. Attach the keys to the set of numbered tags supplied with the cabinet. (The permanent tag). Instruct the owner in proper use of the system. Install cabinet as directed by the VA Project Engineer (COTR).

2.15 ARMOR PLATES, KICK PLATES, MOP PLATES AND DOOR EDGING

A. Conform to ANSI Standard A156.6.

B. Provide protective plates and door edging as specified below:

1. Kick plates, mop plates and armor plates of metal, Type J100 series.
2. Provide kick plates and mop plates where specified. Kick plates shall be 305 mm (12 inches) high. Kick plates shall be minimum 1.27 mm (0.050 inches) thick. Provide kick plates beveled on all 4 edges

(B4E). On push side of doors where jamb stop extends to floor, make kick plates 38 mm (1-1/2 inches) less than width of door, except pairs of metal doors which shall have plates 25 mm (1 inch) less than width of each door. Extend all other kick plates to within 6 mm (1/4 inch) of each edge of doors. Kick plates shall butt astragals. For jamb stop requirements, see specification sections pertaining to door frames.

3. Provide stainless steel edge guards where so specified at wood doors. Provide mortised type instead of surface type except where door construction and/or ratings will not allow. Provide edge guards of bevel and thickness to match wood door. Provide edge guards with factory cut-outs for door hardware that must be installed through or extend through the edge guard. Provide full-height edge guards except where door rating does not allow; in such cases, provide edge guards to height of bottom of typical lockset armor front. Forward edge guards to wood door manufacturer for factory installation on doors.

2.16 NOT USED

2.17 NOT USED

2.18 NOT USED

2.19 NOT USED

2.20 NOT USED

2.21 COMBINATION PUSH AND PULL PLATES

A. Conform to ANSI 156.6. Type J303, stainless steel 3 mm (1/8 inch) thick, 80 mm (3-1/3 inches) wide by 800 mm (16 inches) high), top and bottom edges shall be rounded. Secure plates to wood doors with 38 mm (1-1/2 inch) long No. 12 wood screws. Cut plates for turn pieces, and cylinders where required. Pull shall be mounted down.

2.22 NOT USED

2.23 THRESHOLDS

A. Conform to ANSI A156.21, mill finish extruded aluminum. In existing construction, thresholds shall be installed in a bed of sealant with ¼-20 stainless steel machine screws and expansion shields. In new construction, embed aluminum anchors coated with epoxy in concrete to secure thresholds. Furnish thresholds for the full width of the openings.

B. Provide with miter returns where threshold extends more than 12 mm (0.5 inch) beyond face of frame.

2.24 AUTOMATIC DOOR BOTTOM SEAL AND RUBBER GASKET FOR SOUND CONTROL DOORS

A. Conform to ANSI A156.22. Provide mortise or under-door type, except where not practical. For mortise automatic door bottoms, provide type specific for door construction (wood or metal).

2.25 NOT USED

2.26 MISCELLANEOUS HARDWARE

A. Cylinders for Various Partitions and Doors: Provide cylinders to operate locking devices where specified for following partitions and doors:

1. Fire-rated access doors-Engineer's key set.

2.27 NOT USED

2.28 NOT USED

2.29 NOT USED

2.30 FINISHES

A. Exposed surfaces of hardware shall have ANSI A156.18, finishes as specified below. Finishes on all hinges, pivots, closers, thresholds, etc., shall be as specified below under "Miscellaneous Finishes."

B. 630 Stainless Steel: All surfaces on interior of buildings, except where other finishes are specified.

C. Miscellaneous Finishes:

2. Hinges --interior doors: 630 stainless steel.
3. Pivots: Match door trim.
4. Door Closers: Factory applied paint finish. Aluminum finish 689 where applicable
5. Thresholds: Mill finish aluminum.
6. Cover plates for floor hinges and pivots: 630.
7. Other primed steel hardware: 600.

D. Hardware Finishes for Existing Buildings: U.S. Standard finishes shall match finishes of hardware in (similar) existing spaces.

E. Anti-microbial Coating: All hand-operated hardware (levers, pulls, push bars, push plates, paddles, and panic bars) shall be provided with an anti-microbial/anti-fungal coating that has passed ASTM E2180 tests. Coating to consist of ionic silver (Ag+). Silver ions surround bacterial cells, inhibiting growth of bacteria, mold, and mildew by blockading food and respiration supplies.

2.31 BASE METALS

A. Apply specified U.S. Standard finishes on different base metals as following:

Finish	Base Metal
652	Steel
630	Stainless steel

PART 3 - EXECUTION

3.1 HARDWARE HEIGHTS

A. For existing buildings locate hardware on doors at heights to match existing hardware. The Contractor shall visit the site, verify location of existing hardware and submit locations to VA Project Engineer (COTR) for approval.

B. Hardware Heights from Finished Floor:

1. Locksets and latch sets centerline of strike 1024 mm (40-5/16 inches).
2. Locate other hardware at standard commercial heights. Locate push and pull plates to prevent conflict with other hardware.

3.2 INSTALLATION

A. Closer devices, shall be equipped and mounted to provide maximum door opening permitted by building construction or equipment. Closers shall be mounted on side of door inside rooms, and away from corridors. Where closers are mounted on doors they shall be mounted with sex nuts and bolts; foot shall be fastened to frame with machine screws.

B. Hinge Size Requirements:

Door Thickness	Door Width	Hinge Height
45 mm (1-3/4 inch)	Over 900 mm (3 feet) but not more than 1200 mm (4 feet)	125 mm (5 inches)

C. Hinge leaves shall be sufficiently wide to allow doors to swing clear of door frame trim and surrounding conditions.

D. Where new hinges are specified for new doors in existing frames or existing doors in new frames, sizes of new hinges shall match sizes of existing hinges; contractor may NOT reuse existing hinges. Existing hinges shall not be reused on door openings having new doors and new frames. Coordinate preparation for hinge cut-outs and screw-hole locations on doors and frames.

E. Hinges Required Per Door:

Doors over 1500 mm (5 ft) high and not over 2280 mm (7 ft 6 in) high	3 butts

F. Fastenings: Suitable size and type and shall harmonize with hardware as to material and finish. Provide machine screws and lead expansion shields to secure hardware to concrete, ceramic or quarry floor tile, or solid masonry. Fiber or rawl plugs and adhesives are not permitted. All fastenings exposed to weather shall be of nonferrous metal.

G. After locks have been installed; show in presence of VA Project Engineer (COTR) and VA Locksmith that keys operate their respective locks in accordance with keying requirements. All keys, Master Key level and above shall be hand delivered to the VA Project Engineer and VA Locksmith. Installation of locks which do not meet specified keying requirements shall be considered sufficient justification for rejection and replacement of all locks installed on project.

3.3 FINAL INSPECTION

A. Installer to provide letter to VA Project Engineer (COTR) and VA Locksmith that upon completion, installer has visited the Project and has accomplished the following:

1. Re-adjust hardware.
2. Evaluate maintenance procedures and recommend changes or additions, and instruct VA personnel.
3. Identify items that have deteriorated or failed.
4. Submit written report identifying problems.

3.4 DEMONSTRATION

A. Demonstrate efficacy of mechanical hardware, including adjustment and maintenance procedures, to satisfaction of VA Project Engineer and VA Locksmith.

3.5 HARDWARE SETS

A. Hardware Consultant working on a project will be responsible for providing additional information regarding these hardware sets. The numbers shown in the following sets come from BHMA standards.

INTERIOR SINGLE DOORS

HW-1L

Each Door to Have:	FIRE & SOUND-RATED
1 Continuous Hinge	See specifications
1 Latchset	See specifications
1 Kick Plate	See specifications
1 Threshold	See specifications
Edge Guard (@ Wood Doors)	See specifications
2 Coat Hooks	See specifications
1 Floor Stop	Type L02141 or L02161
1 Overhead Door Closer	Norton 1603BC Tri-Style Aluminum Storefront Closer or equal.

1 AUTOMATIC DOOR BOTTOM SEAL AND RUBBER GASKET FOR SOUND CONTROL DOORS

- - - E N D - - -

SECTION 09 22 16
NON-STRUCTURAL METAL FRAMING

PART 1 - GENERAL

1.1 DESCRIPTION

This section specifies steel studs wall systems, shaft wall systems, ceiling or soffit suspended or furred framing, wall furring, fasteners, and accessories for the screw attachment of gypsum board, plaster bases or other building boards.

1.2 RELATED WORK

A. Support for wall mounted items: Section 05 50 00, METAL FABRICATIONS.

B. Ceiling suspension systems for acoustical tile or panels and lay in gypsum board panels: Section 09 51 00, ACOUSTICAL CEILINGS// Section 09 29 00, GYPSUM BOARD.

1.3 TERMINOLOGY

A. Description of terms shall be in accordance with ASTM C754, ASTM C11, ASTM C841 and as specified.

B. Underside of Structure Overhead: In spaces where steel trusses or bar joists are shown, the underside of structure overhead shall be the underside of the floor or roof construction supported by beams, trusses, or bar joists. In interstitial spaces with walk-on floors the underside of the walk-on floor is the underside of structure overhead.

C. Thickness of steel specified is the minimum bare (uncoated) steel thickness.

1.4 SUBMITTALS

A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.

B. Manufacturer's Literature and Data:

1. Studs, runners and accessories.
2. Hanger inserts.
3. Channels (Rolled steel).
4. Furring channels.
5. Screws, clips and other fasteners.

C. Shop Drawings:

1. Typical ceiling suspension system.
2. Typical metal stud and furring construction system including details around openings and corner details.
3. Typical shaft wall assembly

4. Typical fire rated assembly and column fireproofing showing details of construction same as that used in fire rating test.

D. Test Results: Fire rating test designation, each fire rating required for each assembly.

1.5 DELIVERY, IDENTIFICATION, HANDLING AND STORAGE

In accordance with the requirements of ASTM C754.

1.6 APPLICABLE PUBLICATIONS

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

B. American Society For Testing And Materials (ASTM)

A641-09.....Zinc-Coated (Galvanized) Carbon Steel Wire

A653/653M-11.....Specification for Steel Sheet, Zinc Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by Hot-Dip Process.

C11-10.....Terminology Relating to Gypsum and Related Building Materials and Systems

C635-07.....Manufacture, Performance, and Testing of Metal Suspension System for Acoustical Tile and Lay-in Panel Ceilings

C636-08.....Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels

C645-09.....Non-Structural Steel Framing Members

C754-11.....Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products

C841-03(R2008).....Installation of Interior Lathing and Furring

C954-10.....Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness

E580-11.....Application of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Requiring Moderate Seismic Restraint.

PART 2 - PRODUCTS

2.1 PROTECTIVE COATING

Galvanize steel studs, runners (track), rigid (hat section) furring channels, "Z" shaped furring channels, and resilient furring channels, with coating designation of G40 or equivalent.

2.2 STEEL STUDS AND RUNNERS (TRACK)

A. ASTM C645, modified for thickness specified and sizes as shown.
   1. Use C 645 steel, 0.75 mm (0.0296-inch) minimum base-metal (30 mil).
   2. Runners same thickness as studs.
   3. Exception: Members that can show certified third party testing with gypsum board in accordance with ICC ES AC86 (Approved May 2012) need not meet the minimum thickness limitation or minimum section properties set forth in ASTM C 645. The submission of an evaluation report is acceptable to show conformance to this requirement. Use C 645 steel, 0.48mm (0.019 inch) minimum base-metal (19 mil).

B. Provide not less than two cutouts in web of each stud, approximately 300 mm (12 inches) from each end, and intermediate cutouts on approximately 600 mm (24-inch) centers.

C. Doubled studs for openings and studs for supporting concrete backer-board.

D. Studs 3600 mm (12 feet) or less in length shall be in one piece.

E. Shaft Wall Framing:
   1. Conform to rated wall construction.
   2. C-H Studs or C-T Studs.
   3. E Studs.
   4. J Runners.
   5. Steel Jamb-Strut.

2.3 FURRING CHANNELS

A. Rigid furring channels (hat shape): ASTM C645.

B. Resilient furring channels:
   1. Not less than 0.45 mm (0.0179-inch) thick bare metal.
   2. Semi-hat shape, only one flange for anchorage with channel web leg slotted on anchorage side, channel web leg on other side stiffens fastener surface but shall not contact anchorage surface other channel leg is attached to.

C. "Z" Furring Channels:
   1. Not less than 0.45 mm (0.0179-inch)-thick base metal, with 32 mm (1-1/4 inch) and 19 mm (3/4-inch) flanges.
   2. Web furring depth to suit thickness of insulation.

D. Rolled Steel Channels: ASTM C754, cold rolled; or, ASTM C841, cold rolled.

2.4 FASTENERS, CLIPS, AND OTHER METAL ACCESSORIES

A. ASTM C754, except as otherwise specified.

B. For fire rated construction: Type and size same as used in fire rating test.

C. Fasteners for steel studs thicker than 0.84 mm (0.033-inch) thick. Use ASTM C954 steel drill screws of size and type recommended by the manufacturer of the material being fastened.

D. Clips: ASTM C841 (paragraph 6.11), manufacturer's standard items. Clips used in lieu of tie wire shall have holding power equivalent to that provided by the tie wire for the specific application.

E. Concrete ceiling hanger inserts (anchorage for hanger wire and hanger straps): Steel, zinc-coated (galvanized), manufacturers standard items, designed to support twice the hanger loads imposed and the type of hanger used.

F. Tie Wire and Hanger Wire:

1. ASTM A641, soft temper, Class 1 coating.
2. Gage (diameter) as specified in ASTM C754 or ASTM C841.

G. Attachments for Wall Furring:

1. Manufacturers standard items fabricated from zinc-coated (galvanized) steel sheet.
2. For concrete or masonry walls: Metal slots with adjustable inserts or adjustable wall furring brackets. Spacers may be fabricated from 1 mm (0.0396-inch) thick galvanized steel with corrugated edges.

H. Power Actuated Fasteners: Type and size as recommended by the manufacturer of the material being fastened.

PART 3 - EXECUTION

3.1 INSTALLATION CRITERIA

A. Where fire rated construction is required for walls, partitions, columns, beams and floor-ceiling assemblies, the construction shall be same as that used in fire rating test.

B. Construction requirements for fire rated assemblies and materials shall be as shown and specified, the provisions of the Scope paragraph (1.2) of ASTM C754 and ASTM C841 regarding details of construction shall not apply.

3.2 INSTALLING STUDS

A. Install studs in accordance with ASTM C754, except as otherwise shown or specified.

B. Space studs not more than 610 mm (24 inches) on center.

C. Cut studs 6 mm to 9 mm (1/4 to 3/8-inch) less than floor to underside of structure overhead when extended to underside of structure overhead.

D. Where studs are shown to terminate above suspended ceilings, provide bracing as shown or extend studs to underside of structure overhead.

E. Extend studs to underside of structure overhead for fire, rated partitions, smoke partitions, shafts, and sound rated partitions.

G. Openings:

1. Frame jambs of openings in stud partitions and furring with two studs placed back to back or as shown.
2. Fasten back to back studs together with 9 mm (3/8-inch) long Type S pan head screws at not less than 600 mm (two feet) on center, staggered along webs.
3. Studs fastened flange to flange shall have splice plates on both sides approximately 50 X 75 mm (2 by 3 inches) screwed to each stud with two screws in each stud. Locate splice plates at 600 mm (24 inches) on center between runner tracks.

H. Fastening Studs:

1. Fasten studs located adjacent to partition intersections, corners and studs at jambs of openings to flange of runner tracks with two screws through each end of each stud and flange of runner.
2. Do not fasten studs to top runner track when studs extend to underside of structure overhead.

I. Chase Wall Partitions:

1. Locate cross braces for chase wall partitions to permit the installation of pipes, conduits, carriers and similar items.
2. Use studs or runners as cross bracing not less than 63 mm (2-1/2 inches wide).

J. Form building seismic or expansion joints with double studs back to back spaced 75 mm (three inches) apart plus the width of the seismic or expansion joint.

K. Form control joint, with double studs spaced 13 mm (1/2-inch) apart.

3.3 INSTALLING WALL FURRING FOR FINISH APPLIED TO ONE SIDE ONLY

A. In accordance with ASTM C754, or ASTM C841 except as otherwise specified or shown.

B. Wall furring-Stud System:

1. Framed with 63 mm (2-1/2 inch) or narrower studs, 600 mm (24 inches) on center.

2. Brace as specified in ASTM C754 for Wall Furring-Stud System or brace with sections or runners or studs placed horizontally at not less than three foot vertical intervals on side without finish.
3. Securely fasten braces to each stud with two Type S pan head screws at each bearing.

C. Direct attachment to masonry or concrete; rigid channels or "Z" channels:
1. Install rigid (hat section) furring channels at 600 mm (24 inches) on center, horizontally or vertically.
2. Install "Z" furring channels vertically spaced not more than 600 mm (24 inches) on center.
3. At corners where rigid furring channels are positioned horizontally, provide mitered joints in furring channels.
4. Ends of spliced furring channels shall be nested not less than 200 mm (8 inches).
5. Fasten furring channels to walls with power-actuated drive pins or hardened steel concrete nails. Where channels are spliced, provide two fasteners in each flange.
6. Locate furring channels at interior and exterior corners in accordance with wall finish material manufacturers printed erection instructions. Locate "Z" channels within 100 mm (4 inches) of corner.

D. Installing Wall Furring-Bracket System: Space furring channels not more than 400 mm (16 inches) on center.

3.4 INSTALLING SUPPORTS REQUIRED BY OTHER TRADES

A. Provide for attachment and support of electrical outlets, plumbing, laboratory or heating fixtures, recessed type plumbing fixture accessories, access panel frames, wall bumpers, wood seats, toilet stall partitions, dressing booth partitions, urinal screens, chalkboards, tackboards, wall-hung casework, handrail brackets, recessed fire extinguisher cabinets and other items like auto door buttons and auto door operators supported by stud construction.

B. Provide additional studs where required. Install metal backing plates, or special metal shapes as required, securely fastened to metal studs.

3.6 INSTALLING FURRED AND SUSPENDED CEILINGS OR SOFFITS

A. Install furred and suspended ceilings or soffits in accordance with ASTM C754 or ASTM C841 except as otherwise specified or shown for screw attached gypsum board ceilings and for plaster ceilings or soffits.

1. Space framing at 400 mm (16-inch) centers for metal lath anchorage.
2. Space framing at 600 mm (24-inch) centers for gypsum board anchorage.

B. New exposed concrete slabs:
1. Use metal inserts required for attachment and support of hangers or hanger wires with tied wire loops for embedding in concrete.
2. Furnish for installation under Division 3, CONCRETE.
3. Suspended ceilings under concrete rib construction shall have runner channels at right angles to ribs and be supported from ribs with hangers at ends and at 1200 mm (48-inch) maximum intervals along channels. Stagger hangers at alternate channels.

C. Concrete slabs on steel decking composite construction:
1. Use pull down tabs when available.
2. Use power activated fasteners when direct attachment to structural framing can not be accomplished.

D. Where bar joists or beams are more than 1200 mm (48 inches) apart, provide intermediate hangers so that spacing between supports does not exceed 1200 mm (48 inches). Use clips, bolts, or wire ties for direct attachment to steel framing.

E. Existing concrete construction exposed or concrete on steel decking:
1. Use power actuated fasteners either eye pin, threaded studs or drive pins for type of hanger attachment required.
2. Install fasteners at approximate mid height of concrete beams or joists. Do not install in bottom of beams or joists.

F. Steel decking without concrete topping:
1. Do not fasten to steel decking 0.76 mm (0.0299-inch) or thinner.
2. Toggle bolt to decking 0.9 mm (0.0359-inch) or thicker only where anchorage to steel framing is not possible.

G. Installing suspended ceiling system for gypsum board (ASTM C635 Option):
1. Install only for ceilings to receive screw attached gypsum board.
2. Install in accordance with ASTM C636.
   a. Install main runners spaced 1200 mm (48 inches) on center.
   b. Install 1200 mm (four foot) tees not over 600 mm (24 inches) on center; locate for edge support of gypsum board.
   c. Install wall track channel at perimeter.

H. Installing Ceiling Bracing System:

1. Construct bracing of 38 mm (1-1/2 inch) channels for lengths up to 2400 mm (8 feet) and 50 mm (2 inch) channels for lengths over 2400 mm (8 feet) with ends bent to form surfaces for anchorage to carrying channels and over head construction. Lap channels not less than 600 mm (2 feet) at midpoint back to back. Screw or bolt lap together with two fasteners.
2. Install bracing at an approximate 45 degree angle to carrying channels and structure overhead; secure as specified to structure overhead with two fasteners and to carrying channels with two fasteners or wire ties.

3.7 TOLERANCES

A. Fastening surface for application of subsequent materials shall not vary more than 3 mm (1/8-inch) from the layout line.

B. Plumb and align vertical members within 3 mm (1/8-inch.)

C. Level or align ceilings within 3 mm (1/8-inch.)

- - - E N D - - -

SECTION 09 29 00
GYPSUM BOARD

PART 1 - GENERAL

1.1 DESCRIPTION

This section specifies installation and finishing of gypsum board.

1.2 RELATED WORK

A. Installation of steel framing members for walls, partitions, furring, and ceilings:

B. Acoustical Sealants: Section 07 92 00, JOINT SEALANTS.

1.3 TERMINOLOGY

A. Definitions and description of terms shall be in accordance with ASTM C11, C840, and as specified.

B. Underside of Structure Overhead: In spaces where steel trusses or bar joists are shown, the underside of structure overhead shall be the underside of the floor or roof construction supported by the trusses or bar joists.

C. "Yoked": Gypsum board cut out for opening with no joint at the opening (along door jamb or above the door).

1.4 SUBMITTALS

A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.

B. Manufacturer's Literature and Data:

1. Cornerbead and edge trim.
2. Finishing materials.
3. Laminating adhesive.
4. Gypsum board, each type.

C. Shop Drawings:

1. Typical gypsum board installation, showing corner details, edge trim details and the like.
2. Typical sound rated assembly, showing treatment at perimeter of partitions and penetrations at gypsum board.
3. Typical fire rated assembly and fireproofing, indicating details of construction same as that used in fire rating test.

D. Samples:

1. Cornerbead.
2. Edge trim.
3. Control joints.

E. Test Results:

1. Fire rating test, each fire rating required for each assembly.
2. Sound rating test.

F. Certificates: Certify that gypsum board types, gypsum backing board types, cementitious backer units, and joint treating materials do not contain asbestos material.

1.5 DELIVERY, IDENTIFICATION, HANDLING AND STORAGE

In accordance with the requirements of ASTM C840.

1.6 ENVIRONMENTAL CONDITIONS

In accordance with the requirements of ASTM C840.

1.7 APPLICABLE PUBLICATIONS

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

B. American Society for Testing And Materials (ASTM):

C11-08.....Terminology Relating to Gypsum and Related Building Materials and Systems

C475-02.....Joint Compound and Joint Tape for Finishing Gypsum Board

C840-08.....Application and Finishing of Gypsum Board

C919-08.....Sealants in Acoustical Applications

C954-07.....Steel Drill Screws for the Application of Gypsum Board or Metal Plaster Bases to Steel Stud from 0.033 in. (0.84mm) to 0.112 in. (2.84mm) in thickness

C1002-07.....Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs

C1047-05.....Accessories for Gypsum Wallboard and Gypsum Veneer Base

C1177-06.....Glass Mat Gypsum Substrate for Use as Sheathing

C1658-06.....Glass Mat Gypsum Panels

C1396-06.....Gypsum Board

E84-08.....Surface Burning Characteristics of Building Materials

C. Underwriters Laboratories Inc. (UL):

Latest Edition.....Fire Resistance Directory

D. Inchcape Testing Services (ITS):

Latest Editions.....Certification Listings

PART 2 - PRODUCTS

2.1 GYPSUM BOARD

A. Gypsum Board: ASTM C1396, Type X, 16 mm (5/8 inch) thick unless shown otherwise. Shall contain a minimum of 20 percent recycled gypsum.

B. Water Resistant Gypsum Backing Board: ASTM C620, Type X, 16 mm (5/8 inch) thick. Use at wall behind caregiver station, kitchenette and in mechanical room C311B at wall adjacent drain.

D. Gypsum cores shall contain maximum percentage of post industrial recycled gypsum content available in the area (a minimum of 95 percent post industrial recycled gypsum content). Paper facings shall contain 100 percent post-consumer recycled paper content.

2.2 GYPSUM SHEATHING BOARD

A. ASTM C1396, Type X, water-resistant core, 16 mm (5/8 inch) thick.

B. ASTM C1177, Type X.

2.3 ACCESSORIES

A. ASTM C1047, except form of 0.39 mm (0.015 inch) thick zinc coated steel sheet or rigid PVC plastic.

B. Flanges not less than 22 mm (7/8 inch) wide with punchouts or deformations as required to provide compound bond.

2.4 FASTENERS

A. ASTM C1002 and ASTM C840, except as otherwise specified.

B. ASTM C954, for steel studs thicker than 0.04 mm (0.33 inch).

C. Select screws of size and type recommended by the manufacturer of the material being fastened.

D. For fire rated construction, type and size same as used in fire rating test.

E. Clips: Zinc-coated (galvanized) steel; gypsum board manufacturer's standard items.

2.5 FINISHING MATERIALS AND LAMINATING ADHESIVE

ASTM C475 and ASTM C840. Free of antifreeze, vinyl adhesives, preservatives, biocides and other VOC. Adhesive shall contain a maximum VOC content of 50 g/l.

PART 3 - EXECUTION

3.1 GYPSUM BOARD HEIGHTS

A. Extend all layers of gypsum board from floor to underside of structure overhead at all partition and furring locations.

3.2 INSTALLING GYPSUM BOARD

A. Coordinate installation of gypsum board with other trades and related work.

B. Install gypsum board in accordance with ASTM C840, except as otherwise specified.

C. Moisture and Mold–Resistant Assemblies: Provide and install moisture and mold-resistant glass mat gypsum wallboard products with moisture-resistant surfaces complying with ASTM C1658 where shown and in locations which might be subject to moisture exposure during construction.

D. Use gypsum boards in maximum practical lengths to minimize number of end joints.

E. Bring gypsum board into contact, but do not force into place.

F. Walls (Except Shaft Walls):

1. When gypsum board is installed parallel to framing members, space fasteners 300 mm (12 inches) on center in field of the board, and 200 mm (8 inches) on center along edges.
2. When gypsum board is installed perpendicular to framing members, space fasteners 300 mm (12 inches) on center in field and along edges.
3. Stagger screws on abutting edges or ends.
4. For single-ply construction, apply gypsum board with long dimension either parallel or perpendicular to framing members as required to minimize number of joints except gypsum board shall be applied vertically over "Z" furring channels.
5. For two-ply gypsum board assemblies, apply base ply of gypsum board to assure minimum number of joints in face layer. Apply face ply of wallboard to base ply so that joints of face ply do not occur at joints of base ply with joints over framing members.
6. No offset in exposed face of walls and partitions will be permitted because of single-ply and two-ply or three-ply application requirements.
7. Control Joints ASTM C840 and as follows:
   a. Locate at both side jambs of openings if gypsum board is not "yoked". Use one system throughout.
   b. Extend control joints the full height of the wall

H. Acoustical or Sound Rated Partitions, Fire and Smoke Partitions:

All new walls built between new exam offices, mechanical space separating new break rooms shall have sound rating of 45 or better and shall have sound batt insulation, minimum 4”.

1. Cut gypsum board for a space approximately 3 mm to 6 mm (1/8 to 1/4 inch) wide around partition perimeter.
2. Coordinate for application of caulking or sealants to space prior to taping and finishing.
3. For sound rated partitions, use sealing compound (ASTM C919) to fill the annular spaces between all receptacle boxes and the partition finish material through which the boxes protrude to seal all holes and/or openings on the back and sides of the boxes. STC minimum values as shown.

I. Electrical and Telecommunications Boxes:

1. Seal annular spaces between electrical and telecommunications receptacle boxes and gypsum board partitions.

J. Accessories:

1. Set accessories plumb, level and true to line, neatly mitered at corners and intersections, and securely attach to supporting surfaces as specified.
2. Install in one piece, without the limits of the longest commercially available lengths.
3. Corner Beads:
   a. Install at all vertical and horizontal external corners and where shown.
   b. Use screws only. Do not use crimping tool.
4. Edge Trim (casings Beads):
   a. At both sides of expansion and control joints unless shown otherwise.
   b. Where gypsum board terminates against dissimilar materials and at perimeter of openings, except where covered by flanges, casings or permanently built-in equipment.
   c. Where gypsum board surfaces of non-load bearing assemblies abut load bearing members.
   d. Where shown.

3.3 FINISHING OF GYPSUM BOARD

A. Finish joints, edges, corners, and fastener heads in accordance with ASTM C840. Use Level 4 finish for al finished areas open to public view.

B. Before proceeding with installation of finishing materials, assure the following:
   1. Gypsum board is fastened and held close to framing or furring.
   2. Fastening heads in gypsum board are slightly below surface in dimple formed by driving tool.

C. Finish joints, fasteners, and all openings, including openings around penetrations, on that part of the gypsum board extending above suspended ceilings to seal surface of all construction. After the installation of hanger rods, hanger wires, supports, equipment, conduits, piping and similar work, seal remaining openings and maintain the integrity of the construction.

3.6 REPAIRS

A. After taping and finishing has been completed, and before decoration, repair all damaged and defective work, including nondecorated surfaces.

B. Patch holes or openings 13 mm (1/2 inch) or less in diameter, or equivalent size, with a setting type finishing compound or patching plaster.

C. Repair holes or openings over 13 mm (1/2 inch) diameter, or equivalent size, with 16 mm (5/8 inch) thick gypsum board secured in such a manner as to provide solid substrate equivalent to undamaged surface.

D. Tape and refinish scratched, abraded or damaged finish surfaces including cracks and joints in non decorated surface to provide smoke tight construction, fire protection equivalent to the fire rated construction and STC equivalent to the sound rated construction.

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SECTION 09 65 13
RESILIENT BASE

PART 1 - GENERAL

1.1 DESCRIPTION

This section specifies the installation of vinyl base.

1.2 SUBMITTALS

A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.

B. Manufacturer's Literature and Data:

1. Description of each product.
2. Base material manufacturer's recommendations for adhesives.
3. Application and installation instructions.

C. Samples:

1. Base: 150 mm (6 inches) long, each type and color.
2. Adhesive: Literature indicating each type.

1.3 DELIVERY

A. Deliver materials to the site in original sealed packages or containers, clearly marked with the manufacturer's name or brand, type and color, production run number and date of manufacture.

B. Materials from containers which have been distorted, damaged or opened prior to installation will be rejected.

1.4 STORAGE

A. Store materials in weather tight and dry storage facility.

B. Protect material from damage by handling and construction operations before, during, and after installation.

1.5 APPLICABLE PUBLICATIONS

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

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

F1344-10.....Rubber Floor Tile
F1859-10.....Rubber Sheet Floor Covering without Backing
F1860-10.....Rubber Sheet Floor Covering with Backing
F1861-08.....Resilient Wall Base

C. Federal Specifications (Fed. Spec.):

RR-T-650E.....Treads, Metallic and Non-Metallic, Nonskid

PART 2 - PRODUCTS

2.1 GENERAL

Use only products by the same manufacturer and from the same production run.

2.2 RESILIENT BASE

A. ASTM F1861, 3 mm (1/8 inch) thick, 100 mm (6 inches) high, Thermoplastics, Group 2-layered. Style B-cove.

B. Use only one type of base throughout.

2.3 PRIMER (FOR CONCRETE FLOORS)

As recommended by the adhesive and tile manufacturer.

2.4 LEVELING COMPOUND (FOR CONCRETE FLOORS)

Provide products with latex or polyvinyl acetate resins in the mix.

2.5 ADHESIVES

A. Use products recommended by the material manufacturer for the conditions of use.

B. Use low-VOC adhesive during installation. Water based adhesive with low VOC is preferred over solvent based adhesive.

PART 3 - EXECUTION

3.1 PROJECT CONDITIONS

A. Maintain temperature of materials above 21^{o} C (70 °F), for 48 hours before installation. Maintain temperature log & provide VA Project Engineer prior to installation.

B. Maintain temperature of rooms where work occurs, between 21^{o} C and 27^{o} C (70^{o}F and 80^{o}F) for at least 48 hours, before, during, and after installation. Maintain temperature log & provide VA Project Engineer prior to installation.

C. Do not install materials until building is permanently enclosed and wet construction is complete, dry, and cured.

3.2 INSTALLATION REQUIREMENTS

A. The respective manufacturer's instructions for application and installation will be considered for use when approved by the VA Project Engineer.

B. The VA Project Engineer reserves the right to have test portions of material installation removed to check for non-uniform adhesion and spotty adhesive coverage at no additional cost or time to the government.

3.3 PREPARATION

A. Examine surfaces on which material is to be installed.

B. Fill cracks, pits, and dents with leveling compound. The entire existing concrete floor shall be cleaned, leveled and brought to an elevation to allow for the installation of the resilient flooring and base.

C. Level to 3 mm (1/8 inch) maximum variations.

D. Do not use adhesive for leveling or filling.

E. Grind, sand, or cut away protrusions; grind high spots.

F. Clean substrate area of oil, grease, dust, paint, and deleterious substances.
G. Substrate area dry and cured. Perform manufacturer’s recommended bond and moisture test.
H. Preparation of existing installation:
   1. Remove existing base and stair treads including adhesive.
   2. Do not use solvents to remove adhesives.
   3. Prepare substrate as specified.

3.4 BASE INSTALLATION

A. Location:
   1. Extend base scheduled for room into adjacent closet, alcoves, and around columns.
B. Application:
   1. Apply adhesive uniformly with no bare spots.
   2. Set base with joints aligned and butted to touch for entire height.
   3. Before starting installation, layout base material to provide the minimum number of joints with no strip less than 600 mm (24 inches) length.
      a. Short pieces to save material will not be permitted.
      b. Locate joints as remote from corners as the material lengths or the wall configuration will permit.
C. Form corners and end stops as follows:
   1. Score back of outside corner.
   2. Score face of inside corner and notch cove.
D. Roll base for complete adhesion.

3.5 CLEANING AND PROTECTION

A. Clean all exposed surfaces of base and adjoining areas of adhesive spatter before it sets.
B. Keep traffic off resilient material for at least 72 hours after installation.
C. Clean and polish materials in the following order:
   1. After two weeks, scrub resilient base, sheet rubber and treads materials with a minimum amount of water and a mild detergent. Leave surfaces clean and free of detergent residue. Polish resilient base to a gloss finish.
D. When construction traffic is anticipated, cover materials with reinforced kraft paper and plywood or hardboard properly secured and maintained until removal is directed by the VA Project Engineer.
E. Where protective materials are removed and immediately prior to acceptance, replace damaged materials and re-clean resilient materials.

Damaged materials are defined as having cuts, gouges, scrapes or tears and not fully adhered.

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SECTION 09 65 19
RESILIENT TILE FLOORING

PART 1 - GENERAL

1.1 DESCRIPTION

This section specifies the installation of solid vinyl tile flooring in Room B-204 to match existing condition of CRB202 Corridor.

1.2 RELATED WORK

A. Resilient Base: Section 09 65 13, RESILIENT BASE AND ACCESSORIES.

1.3 SUBMITTALS

A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.

B. Manufacturer's Literature and Data:
   1. Description of each product.
   2. Resilient material manufacturer’s recommendations for adhesives, underlayment, primers and polish.
   3. Application and installation instructions.

C. Samples:
   1. Tile: 300 mm by 300 mm (12 inches by 12 inches) for each type, pattern and color.
   2. Edge Strips: 150 mm (6 inches) long, each type.
   3. Feature Strips: 150 mm (6 inches) long.

D. Shop Drawings:
   1. Layout of pattern
   2. Edge strip locations showing types and detail cross sections.

E. Test Reports:
   1. Abrasion resistance: Depth of wear for each tile type and color and volume loss of tile, certified by independent laboratory.
   2. Tested per ASTM F510.

1.4 DELIVERY

A. Deliver materials to the site in original sealed packages or containers, clearly marked with the manufacturer's name or brand, type and color, production run number and date of manufacture.

B. Materials from containers which have been distorted, damaged or opened prior to installation will be rejected.

1.5 STORAGE

A. Store materials in weathertight and dry storage facility.

B. Protect from damage from handling, water, and temperature.

1.6 APPLICABLE PUBLICATIONS

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

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

D4078-02 (2008).....Water Emulsion Floor Finish

E648-10.....Critical Radiant Flux of Floor Covering Systems Using a Radiant Energy Source

E662-09.....Specific Optical Density of Smoke Generated by Solid Materials

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

F510-93 (R 2008).....Resistance to Abrasion of Resilient Floor Coverings Using an Abrader with a Grit Feed Method

F710-08.....Preparing Concrete Floors to Receive Resilient Flooring

F1066-04 (R2010).....Vinyl Composition Floor Tile

F1344-10.....Rubber Floor Tile

F1700-04 (R2010).....Solid Vinyl Floor Tile

C. Resilient Floor Covering Institute (RFCI):

IP #2.....Installation Practice for Vinyl Composition Tile (VCT)

D. Federal Specifications (Fed. Spec.):

SS-T-312.....Tile Floor: Asphalt, Rubber, Vinyl and Vinyl Composition

PART 2 - PRODUCTS

2.1 GENERAL

A. Furnish product type, materials of the same production run and meeting following criteria.

B. Use adhesives, underlayment, primers and polish recommended by the floor resilient material manufacturer.

C. Critical Radiant Flux: 0.45 watts per sq. cm or more, Class I, per ASTM E 648.

D. Smoke density: Less than 450 per ASTM E662.

2.2 SOLID VINYL-TILE

A. ASTM F1700, 300 mm (12 by 12 inches) square, 3 mm (1/8 inch) thick, homogenous throughout.

B. Color and Pattern uniformly distributed throughout thickness.

C. Where solid vinyl tiles are specified, provide products with recycled content.

2.4 ADHESIVES

A. Comply with applicable regulations regarding toxic and hazardous materials Green Seal (GS-36) for commercial adhesive.

B. Use low-VOC adhesive during installation. Water based is preferred over solvent based adhesives.

2.5 PRIMER (FOR CONCRETE SUBFLOORS)

As recommended by the adhesive and tile manufacturer.

2.6 LEVELING COMPOUND (FOR CONCRETE FLOORS)

A. Provide cementitious products with latex or polyvinyl acetate resins in the mix.

B. Determine the type of underlayment selected for use by the condition to be corrected.

2.7 POLISH AND CLEANERS

A. Cleaners RFCI CL-1.

B. Polish: ASTM D4078.

2.8 EDGE STRIPS

A. 28 mm (1-1/8 inch) wide.

B. Bevel from maximum thickness to minimum thickness for flush joint unless shown otherwise.

C. Extruded aluminum, mill finish, mechanically cleaned:

1. Drill and counter sink edge strip for flat head screws.
2. Space holes near ends and approximately 225 mm (9 inches) on center between.

D. Resilient Edge Strip or Reducer Strip: Fed. Specs. SS-T-312, Solid vinyl.

2.9 SCREWS

Stainless steel flat head screw.

2.10 FEATURE STRIPS

A. Use same material as floor tile.

B. Sizes and shapes as shown.

PART 3 - EXECUTION

3.1 PROJECT CONDITIONS

A. Maintain temperature of materials a minimum of 22 °C (70 °F,) for 48 hours before installation. Maintain temperature log and provide to VA Project Engineer for review prior to installation.

B. Maintain temperature of rooms where work occurs between 21 °C and 27 °C (70 °F and 80 °F), for at least 48 hours, before, during and after

installation. Maintain temperature log and provide to VA Project Engineer for review prior to installation.

C. Do not install flooring until building is permanently enclosed and wet construction in or near areas to receive tile materials is complete, dry and cured.

3.2 SUBFLOOR PREPARATION

A. Verify that concrete slabs comply with ASTM F710. At existing slabs, determine levelness by F-number method in accordance with ASTM E1155. Overall value shall not exceed as follows: FF30/FL20

B. Correct conditions which will impair proper installation.

C. Fill cracks, joints and other irregularities in concrete with leveling compound:

1. Do not use adhesive for filling or leveling purposes.
2. Do not use leveling compound to correct imperfections which can be corrected by spot grinding.
3. Trowel to smooth surface free of trowel marks, pits, dents, protrusions, cracks or joints.

D. Clean floor of oil, paint, dust, and deleterious substances: Leave floor dry and cured free of residue from existing curing or cleaning agents.

E. Concrete Subfloor Testing:
Determine Adhesion and dryness of the floor by bond and moisture tests as recommended by RFCI manual MRP.

F. Perform additional subfloor preparation to obtain satisfactory adherence of flooring if subfloor test patches allows easy removal of tile.

G. Prime the concrete subfloor if the primer will seal slab conditions that would inhibit bonding, or if priming is recommended by the tile or adhesive manufacturers.

H. Preparation of existing installation shall include the removal of existing resilient floor and existing adhesive. Do not use solvents to remove adhesives.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions for application and installation unless specified otherwise.

B. Mix tile from at least two containers. An apparent line either of shades or pattern variance will not be accepted.

C. Tile Layout:

1. Lay tile symmetrically about center of room or space with joints aligned.
2. No tile shall be less than 150 mm (6 inches) and of equal width at walls.
3. Place tile pattern in the same direction; do not alternate tiles.

D. Trim tiles to touch for the length of intersections at pipes and vertical projections, seal joints at pipes with waterproof cement.

E. Application:

1. Apply adhesive uniformly with no bare spots.
   a. Conform to RFC1-TM-6 for joint tightness and for corner intersection unless layout pattern shows random corner intersection.
   b. More than 5 percent of the joints not touching will not be accepted.
2. Roll tile floor with a minimum 45 kg (100 pound) roller. No exceptions.
3. The VA Project Engineer may have test tiles removed to check for non-uniform adhesion, spotty adhesive coverage, and ease of removal. Install new tile for broken removed tile at no additional cost or time to the government.

F. Installation of Edge Strips:

1. Locate edge strips under center line of doors unless otherwise shown.
2. Set resilient edge strips in adhesive. Anchor metal edge strips with anchors and screws specified.
3. Where tile edge is exposed, butt edge strip to touch along tile edge.
4. Where thin set ceramic tile abuts resilient tile, set edge strip against floor file and against the ceramic tile edge.

3.4 CLEANING AND PROTECTION

A. Clean adhesive marks on exposed surfaces during the application of resilient materials before the adhesive sets. Exposed adhesive is not acceptable.

B. Keep traffic off resilient material for a minimum 72 hours after installation.

C. Clean and polish materials in the following order:

1. For the first two weeks sweep and damp mopped only.
2. After two weeks, scrub resilient materials with a minimum amount of water and a mild detergent. Leave surface clean and free of detergent residue.
3. Apply polish to the floors in accordance with the polish manufacturer's instructions.

D. When construction traffic occurs over tile, cover resilient materials with reinforced kraft paper properly secured and maintained until removal is directed by Resident Engineer. At entrances and where wheeled vehicles or carts are used, cover tile with plywood, hardboard, or particle board over paper, secured and maintained until removal is directed by Resident Engineer.

E. When protective materials are removed and immediately prior to acceptance, replace any damage tile, re-clean resilient materials, lightly re-apply polish and buff floors.

3.5 LOCATION

A. Unless otherwise specified or shown, install tile flooring, on floor under areas where casework, laboratory and pharmacy furniture and other equipment occurs, except where mounted in wall recesses.

B. Extend tile flooring for room into adjacent closets and alcoves.

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SECTION 09 91 00
PAINTING

PART 1-GENERAL

1.1 DESCRIPTION

A. Section specifies field painting.

B. Magnetic/Dry Erase Paint: Sherwin Williams 2 coats of Sketch Pad Dry Erase Paint with 3 coats of Sherwin Williams magnetic primer underneath – “Magnetic Paint that is applied as a primer under the Dry Erase paint.

C. Application method would require a minimum of two coats of magnetic paint with 24 hours between coats. More than two may be required for optimal magnetic strength due to the dried film thickness of the dry erase paint, (test patch is required to determine correct installation for your needs) light sand before two coats of wall paint are applied followed by your dry erase paint.

1.2 SUBMITTALS

A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.

B. Manufacturer's Literature and Data:
Before work is started, or sample panels are prepared, submit manufacturer's literature, the current Master Painters Institute (MPI) "Approved Product List" indicating brand label, product name and product code as of the date of contract award, will be used to determine compliance with the submittal requirements of this specification. The Contractor may choose to use subsequent MPI "Approved Product List", however, only one list may be used for the entire contract and each coating system is to be from a single manufacturer. All coats on a particular substrate must be from a single manufacturer. No variation from the MPI "Approved Product List" where applicable is acceptable.

C. Sample Panels:

1. After painters' materials have been approved and before work is started submit sample panels showing each type of finish and color specified.
2. Panels to show color: Composition board, 100 by 250 by 3 mm (4 inch by 10 inch by 1/8 inch).
3. Panel to show transparent finishes: Wood of same species and grain pattern as wood approved for use, 100 by 250 by 3 mm (4 inch by 10 inch face by 1/4 inch) thick minimum, and where both flat and edge grain will be exposed, 250 mm (10 inches) long by sufficient size, 50 by 50 mm (2 by 2 inch) minimum or actual wood member to show complete finish.
4. Attach labels to panel stating the following:

a. Federal Specification Number or manufacturers name and product number of paints used.
b. Specification code number specified in Section 09 06 00, SCHEDULE FOR FINISHES.
c. Product type and color.
d. Name of project.

5. Strips showing not less than 50 mm (2 inch) wide strips of undercoats and 100 mm (4 inch) wide strip of finish coat.

D. Sample of identity markers if used.

E. Manufacturers' Certificates indicating compliance with specified requirements:

1. Manufacturer's paint substituted for Federal Specification paints meets or exceeds performance of paint specified.
2. High temperature aluminum paint.
3. Epoxy coating.
4. Intumescent clear coating or fire retardant paint.
5. Plastic floor coating.

1.3 DELIVERY AND STORAGE

A. Deliver materials to site in manufacturer's sealed container marked to show following:

1. Name of manufacturer.
2. Product type.
3. Batch number.
4. Instructions for use.
5. Safety precautions.

B. In addition to manufacturer's label, provide a label legibly printed as following:

1. Federal Specification Number, where applicable, and name of material.
2. Surface upon which material is to be applied.
3. If paint or other coating, state coat types; prime, body or finish.

C. Maintain space for storage, and handling of painting materials and equipment in a neat and orderly condition to prevent spontaneous combustion from occurring or igniting adjacent items.

D. Store materials at site at least 24 hours before using, at a temperature between 18 and 30 degrees C (65 and 85 degrees F).

1.4 MOCK-UP PANEL

A. Before starting application of water paint mixtures, apply paint as specified to an area, not to exceed 9 m^2 (100 ft^2), selected by VA Project Engineer.

B. Finish and texture approved by VA Project Engineer will be used as a standard of quality for remainder of work.

1.5 APPLICABLE PUBLICATIONS

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

B. American Conference of Governmental Industrial Hygienists (ACGIH):

ACGIH TLV-BKLT-2012.....Threshold Limit Values (TLV) for Chemical Substances and Physical Agents and Biological Exposure Indices (BEIs)

ACGIH TLV-DOC-2012......Documentation of Threshold Limit Values and Biological Exposure Indices, (Seventh Edition)

C. American National Standards Institute (ANSI):

A13.1-07.................Scheme for the Identification of Piping Systems

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

D260-86..........Boiled Linseed Oil

E. Commercial Item Description (CID):

A-A-1555.................Water Paint, Powder (Cementitious, White and Colors) (WPC) (cancelled)

A-A-3120.................Paint, For Swimming Pools (RF) (cancelled)

F. Federal Specifications (Fed Spec):

TT-P-1411A..............Paint, Copolymer-Resin, Cementitious (For Waterproofing Concrete and Masonry Walls) (CEP)

PART 2 - PRODUCTS

2.1 MATERIALS

Paint materials shall conform to VISN 1 color palette, Sherwin-Williams Company paint specifications.

A. Ultra Spec 500 – zero VOC, LEED paint, low odor

B. Eco Spec Silver – zero VOC, low odor, contains pure silver as antimicrobial

C. Pro Industrial Water based Epoxy – low VOC, water based, stain resistant, and durable

D. Pro Industrial Zero VOC Waterborne Epoxy – resistant to corrosion, chemical, abrasion, moisture

2.2 REGULATORY REQUIREMENTS/QUALITY ASSURANCE

A. Paint materials shall conform to the restrictions of the local Environmental and Toxic Control jurisdiction.

1. Volatile Organic Compounds (VOC): VOC content of paint materials shall be zero
2. Lead-Base Paint: Materials shall not contain lead.
3. Asbestos: Materials shall not contain asbestos.

4. Chromate, Cadmium, Mercury, and Silica: Materials shall not contain zinc-chromate, strontium-chromate, Cadmium, mercury or mercury compounds or free crystalline silica.
5. Human Carcinogens: Materials shall not contain any of the ACGIH-BKLT and ACGHI-DOC confirmed or suspected human carcinogens.

PART 3 - EXECUTION

3.1 JOB CONDITIONS

A. Safety: Observe required safety regulations and manufacturer's warning and instructions for storage, handling and application of painting materials.
   1. Take necessary precautions to protect personnel and property from hazards due to falls, injuries, toxic fumes, fire, explosion, or other harm.
   2. Deposit soiled cleaning rags and waste materials in metal containers approved for that purpose. Dispose of such items off the site at end of each days work.

B. Atmospheric and Surface Conditions:
   1. Do not apply coating when air or substrate conditions are:
      a. Less than 3 degrees C (5 degrees F) above dew point.
      b. Below 10 degrees C (50 degrees F) or over 35 degrees C (95 degrees F), unless specifically pre-approved by the Contracting Officer and the product manufacturer. Under no circumstances shall application conditions exceed manufacturer recommendations.
   2. Maintain interior temperatures until paint dries hard.
   3. Apply only on clean, dry and frost free surfaces.

3.2 SURFACE PREPARATION

A. Method of surface preparation is optional, provided results of finish painting produce solid even color and texture specified with no overlays.

B. General:
   1. Remove prefinished items not to be painted such as lighting fixtures, escutcheon plates, hardware, trim, and similar items for reinstallation after paint is dried.
   2. Remove items for reinstallation and complete painting of such items and adjacent areas when item or adjacent surface is not accessible or finish is different.
   3. See other sections of specifications for specified surface conditions and prime coat.
   4. Clean surfaces for painting with materials and methods compatible with substrate and specified finish. Remove any residue remaining from cleaning agents used. Do not use solvents, acid, or steam on concrete and masonry.

C. Ferrous Metals:
   1. Remove oil, grease, soil, drawing and cutting compounds, flux and other detrimental foreign matter in accordance with SSPC-SP 1 (Solvent Cleaning).
   2. Remove loose mill scale, rust, and paint, by hand or power tool cleaning, as defined in SSPC-SP 2 (Hand Tool Cleaning) and SSPC-SP 3 (Power Tool Cleaning). Exception: where high temperature aluminum paint is used, prepare surface in accordance with paint manufacturer's instructions.
   3. Fill dents, holes and similar voids and depressions in flat exposed surfaces of hollow steel doors and frames, access panels, roll-up steel doors and similar items specified to have semi-gloss or gloss finish with TT-F-322D (Filler, Two-Component Type, For Dents, Small Holes and Blow-Holes). Finish flush with adjacent surfaces.
      a. This includes flat head countersunk screws used for permanent anchors.
      b. Do not fill screws of item intended for removal such as glazing beads.
   4. Spot prime abraded and damaged areas in shop prime coat which expose bare metal with same type of paint used for prime coat. Feather edge of spot prime to produce smooth finish coat.
   5. Spot prime abraded and damaged areas which expose bare metal of factory finished items with paint as recommended by manufacturer of item.

D. Gypsum Plaster and Gypsum Board:
   1. Remove efflorescence, loose and chalking plaster or finishing materials.
   2. Remove dust, dirt, and other deterrents to paint adhesion.
   3. Fill holes, cracks, and other depressions with CID-A-A-1272A [Plaster, Gypsum (Spackling Compound) finished flush with adjacent surface, with texture to match texture of adjacent surface. Patch holes over 25 mm (1-inch) in diameter as specified in Section for plaster or gypsum board.

3.3 PAINT PREPARATION

A. Thoroughly mix painting materials to ensure uniformity of color, complete dispersion of pigment and uniform composition.

B. Do not thin unless necessary for application and when finish paint is used for body and prime coats. Use materials and quantities for thinning as specified in manufacturer's printed instructions.

C. Remove paint skins, then strain paint through commercial paint strainer to remove lumps and other particles.

D. Mix two component and two part paint and those requiring additives in such a manner as to uniformly blend as specified in manufacturer's printed instructions unless specified otherwise.

E. For tinting required to produce exact shades specified, use color pigment recommended by the paint manufacturer.

3.4 APPLICATION

A. Start of surface preparation or painting will be construed as acceptance of the surface as satisfactory for the application of materials.

B. Unless otherwise specified, apply paint in three coats; prime, body, and finish. When two coats applied to prime coat are the same, first coat applied over primer is body coat and second coat is finish coat.

C. Apply each coat evenly and cover substrate completely.

D. Allow not less than 48 hours between application of succeeding coats, except as allowed by manufacturer's printed instructions, and approved by VA Project Engineer.

E. Finish surfaces to show solid even color, free from runs, lumps, brushmarks, laps, holidays, or other defects.

F. Apply by brush or roller. Spray is not permitted.

1. Apply painting materials specifically required by manufacturer to be applied by spraying off-hours when adjacent space is not occupied.
2. In areas, where paint is applied by spray, mask or enclose with polyethylene, or similar air tight material with edges and seams continuously sealed including items specified in WORK NOT PAINTED, motors, controls, telephone, and electrical equipment, fronts of sterilizes and other recessed equipment and similar prefinished items.

I. Do not paint in closed position operable items such as access doors and panels, window sashes, overhead doors, and similar items except overhead roll-up doors and shutters.

3.5 PRIME PAINTING

A. After surface preparation prime surfaces before application of body and finish coats, except as otherwise specified.

B. Spot prime and apply body coat to damaged and abraded painted surfaces before applying succeeding coats.

C. Additional field applied prime coats over shop or factory applied prime coats are not required except for exterior exposed steel apply an additional prime coat.

3.6 INTERIOR FINISHES

A. Apply finish coats over prime coats in spaces or on surfaces.

B. Metal Work:

1. Apply to exposed surfaces.

3. Ferrous Metal, Galvanized Metal, and Other Metals Scheduled:

a. Apply two coats

C. Gypsum Board:

1. Apply two coats

E. Masonry and Concrete Walls:

2. Apply two coats

F. Wood:

1. Sanding:

a. Use 220-grit sandpaper.

b. Sand sealers and varnish between coats.

c. Sand enough to scarify surface to assure good adhesion of subsequent coats, to level roughly applied sealer and varnish, and to knock off "whiskers" of any raised grain as well as dust particles.

2. Sealers:

a. Apply sealers specified except sealer may be omitted where pigmented, penetrating, or wiping stains containing resins are used.

b. Allow manufacturer's recommended drying time before sanding, but not less than 24 hours or 36 hours in damp or muggy weather.

c. Sand as specified.

3. Paint Finish:

a. Apply two coats

b. Stain Finish:

4) Apply two coats

c. Varnish Finish:

2) Apply two coats

H. Concrete Floors:

a. Apply one coat

3.7 REFINISHING EXISTING PAINTED SURFACES

A. Clean, patch and repair existing surfaces as specified under surface preparation.

B. Remove and reinstall items as specified under surface preparation.

C. Remove existing finishes or apply separation coats to prevent non compatible coatings from having contact.

D. Patched or Replaced Areas in Surfaces and Components: Apply spot prime and body coats as specified for new work to repaired areas or replaced components.

E. Except where scheduled for complete painting apply finish coat over plane surface to nearest break in plane, such as corner, reveal, or frame.

F. In existing rooms and areas where alterations occur, clean existing stained and natural finished wood retouch abraded surfaces and then give entire surface one coat

G. Refinish areas as specified for new work to match adjoining work unless specified or scheduled otherwise.

H. Coat knots and pitch streaks showing through old finish before refinishing.

I. Sand or dull glossy surfaces prior to painting.

J. Sand existing coatings to a feather edge so that transition between new and existing finish will not show in finished work.

3.8 PAINT COLOR

A. Paint color shall be selected by VA Interior Designer through the submittal process and shall be of the VISN color palette.

B. Interior Designer Painting Clarification Notes:

a. ALL TRIMS TO BE PAINTED A SEMI-GLOSS FINISH

b. DOOR TRIMS TO BE PAINTED SAME COLOR AS WALLS THEY ARE LOCATED ON

c. WALLS ARE TO BE PREPPED TO A LEVEL 4 OR BETTER CONDITION

d. DOOR & WINDOW FRAMES ARE TO BE PREPPED TO A LEVEL 5 CONDITION

e. ALL WALL COVERING IS TO BE REMOVED PRIOR TO WALL PREP & PAINT

f. PLEASE CONTACT INTERIOR DESIGNER IF ANY QUESTION, CONCERN OR IF CLARIFICATION IS NEEDED

3.10 MECHANICAL AND ELECTRICAL WORK FIELD PAINTING SCHEDULE

A. Field painting of mechanical and electrical consists of cleaning, touching-up abraded shop prime coats, and applying prime, body and finish coats to materials and equipment if not factory finished in space scheduled to be finished.

B. Paint various systems specified in Division 21 – FIRE SUPPRESSION, Division 22 - PLUMBING, Division 23 – HEATING, VENTILATION AND AIR-CONDITIONING, Division 26 - ELECTRICAL, Division 27 - COMMUNICATIONS, and Division 28 – ELECTRONIC SAFETY AND SECURITY.

C. Paint after tests have been completed.

D. Omit prime coat from factory prime-coated items.

E. Finish painting of mechanical and electrical equipment is not required when located in interstitial spaces, above suspended ceilings, in concealed areas such as pipe and electric closets, pipe basements, pipe tunnels, trenches, attics, roof spaces, shafts and furred spaces except on electrical conduit containing feeders 600 volts or more.

H. Color:

1. Paint items having no color specified to match surrounding surfaces.
2. Paint colors as specified for following:

a. Gray: .....Heating, ventilating, air conditioning and refrigeration equipment (except as required to match surrounding surfaces
b. Aluminum Color: Ferrous metal in connection with doors and door frames and steam generation system (bare piping, fittings, hangers, supports, valves, traps and miscellaneous iron work in contact with pipe).
d. Federal Safety Red: Exposed fire protection piping, electrical conducts containing fire alarm control wiring, and fire alarm equipment.

3.11 BUILDING AND STRUCTURAL WORK FIELD PAINTING

A. Painting and finishing of interior and exterior work except as specified under paragraph 3.11 B.
1. Painting and finishing of new and existing work.
2. Painting of disturbed damaged and repaired or patched surfaces.
3. Painting of ferrous metal and galvanized metal.
4. Identity painting and safety painting.

B. Building and Structural Work not Painted:
1. Prefinished items:
a. Casework, doors, and similar items specified factory finished under other sections.
2. Finished surfaces:
a. Hardware except ferrous metal.
b. Anodized aluminum, stainless steel, chromium plating, copper, and brass, except as otherwise specified.
c. Signs, fixtures, and other similar items integrally finished.
3. Concealed surfaces:
a. Interstitial spaces, pipe basements, crawl spaces, pipe tunnels, above ceilings.
b. Inside walls or other spaces behind access doors or panels.
c. Surfaces concealed behind permanently installed casework and equipment.
4. Labels:
a. Code required label, such as Underwriters Laboratories Inc., Inchcape Testing Services, Inc., or Factory Mutual Research Corporation.
b. Identification plates, instruction plates, performance rating, and nomenclature.

3.12 IDENTITY PAINTING SCHEDULE

A. Identify designated service in accordance with ANSI A13.1, unless specified otherwise, on exposed piping, piping above removable ceilings,

piping in accessible pipe spaces, interstitial spaces, and piping behind access panels.

1. Legend may be identified using stencil applications.
2. Apply legends adjacent to changes in direction, on branches, where pipes pass through walls or floors, adjacent to operating accessories such as valves, regulators, strainers and cleanouts a minimum of 12 000 mm (40 feet) apart on straight runs of piping. Identification next to plumbing fixtures is not required.
3. Locate Legends clearly visible from operating position.
4. Use arrow to indicate direction of flow.
5. Identify pipe contents with sufficient additional details such as temperature, pressure, and contents to identify possible hazard. Insert working pressure shown on drawings where asterisk appears for High, Medium, and Low Pressure designations as follows:
   a. High Pressure - 414 kPa (60 psig) and above.
   b. Medium Pressure - 104 to 413 kPa (15 to 59 psig).
   c. Low Pressure - 103 kPa (14 psig) and below.
6. Legend name in full or in abbreviated form as follows:

PIPING	COLOR OF EXPOSED PIPING	COLOR OF BACKGROUND	COLOR OF LETTERS	LEGEND BBREVIATIONS
Drain Line		Green	White	Drain
High Pressure Steam		Yellow	Black	H.P. _____*
High Pressure Condensate Return		Yellow	Black	H.P. Ret ____*
Medium Pressure Steam		Yellow	Black	M. P. Stm ____*
Medium Pressure Condensate Return		Yellow	Black	M.P. Ret _____*
Low Pressure Steam		Yellow	Black	L.P. Stm _____*
Low Pressure Condensate Return		Yellow	Black	L.P. Ret _____*
Hot Water Heating Supply		Yellow	Black	H. W. Htg Sup
Hot Water Heating Return		Yellow	Black	H. W. Htg Ret
Gravity Condensate Return		Yellow	Black	Gravity Cond Ret
Cold Water (Domestic)	White	Green	White	C.W. Dom
Hot Water (Domestic)				
Supply	White	Yellow	Black	H.W. Dom
Return	White	Yellow	Black	H.W. Dom Ret
Sanitary Waste		Green	White	San Waste
Sanitary Vent		Green	White	San Vent
Storm Drainage		Green	White	St Drain
Fire Protection Water				
Sprinkler		Red	White	Auto Spr

B. Fire and Smoke Partitions:
   1. Identify partitions above ceilings on both sides of partitions except within shafts in letters not less than 64 mm (2 1/2 inches) high.
   2. Stenciled message: "SMOKE BARRIER" or, "FIRE BARRIER" as applicable.
   3. Locate not more than 6100 mm (20 feet) on center on corridor sides of partitions, and with a least one message per room on room side of partition.
   4. Use semigloss paint of color that contrasts with color of substrate.

C. Identify columns in pipe basements and interstitial space:
   1. Apply stenciled number and letters to correspond with grid numbering and lettering shown.
   2. Paint numbers and letters 100 mm (4 inches) high, locate 450 mm (18 inches) below overhead structural slab.
   3. Apply on four sides of interior columns and on inside face only of exterior wall columns.
   4. Color:
      a. Use black on concrete columns.
      b. Use white or contrasting color on steel columns.

3.14 PROTECTION CLEAN UP, AND TOUCH-UP

A. Protect work from paint droppings and spattering by use of masking, drop cloths, removal of items or by other approved methods.

B. Upon completion, clean paint from hardware, glass and other surfaces and items not required to be painted of paint drops or smears.

C. Before final inspection, touch-up or refinished in a manner to produce solid even color and finish texture, free from defects in work which was damaged or discolored.

- - - E N D - - -

General Decision Number: MA180001 01/05/2018 MA1

Superseded General Decision Number: MA20170001

State: Massachusetts

Construction Type: Building

Counties: Barnstable, Bristol, Dukes, Essex, Middlesex, Nantucket, Norfolk and Suffolk Counties in Massachusetts.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes and apartments up to and including 4 stories)

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.35 for calendar year 2018 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.35 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2018. The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/05/2018

ASBE0006-001 09/01/2017

	Rates	Fringes
Insulator/asbestos worker Includes the application of all insulating materials, protective coverings, coatings, and		

finishes to all types of
mechanical systems
(ZONE A).....$ 46.09 27.50
(ZONE B).....$ 41.48 27.50

ZONES:

ZONE A
BARNSTABLE COUNTY (Brewster, Chatham, Dennis, Eastham, Harwich, Orleans, Provincetown, Truro, Wellfleet, Yarmouth) BRISTOL COUNTY (Easton), MIDDLESEX COUNTY, and NORFOLK COUNTY (Avon, Braintree, Brookline, Canton, Cohasset, Dedham, Dover, Foxborough, Holbrook, Medfield, Medway, Millis, Milton, Needham, Norfolk, Norwood, Quincy, Randolph, Sharon, Stoughton, Walpole, Wellesley, Westwood, Weymouth)

ZONE B
BARNSTABLE COUNTY (Barnstable, Bourne, Falmouth, Mashpee, Sandwich), BRISTOL COUNTY (All cities except Easton),and NORFOLK COUNTY (Bellingham, Franklin, Plainville)

ASBE0006-002 06/01/2017

BARNSTABLE (Brewster, Chatham, Dennis, Eastham, Harwich, Orleans, Provincetown, Truro, Wellfleet and Yarmouth); BRISTOL (Easton); ESSEX; MIDDLESEX; NORFOLK (Avon, Braintree, Brookline, Canton, Cohasset, Dedham, Dover, Foxboro, Holbrook, Hull, Medfield, Medway, Millis, Milton, Needham, Norfolk, Norwood, Quincy, Randolph, Sharon Stoughton, Walpole, Wellesley, Westwood, and Weymouth) AND SUFFOLK COUNTIES

	Rates	Fringes
HAZARDOUS MATERIAL HANDLER (Includes preparation, wetting, stripping, removal, scrapping, vacuuming, bagging and disposing of all insulation materials from mechanical systems whether they contain asbestos or not)	$ 34.45	19.40

ASBE0006-010 09/01/2017

BARNSTABLE (Barnstable, Bourne, Falmouth, Mashpee and

Sandwich); BRISTOL (Acushnet, Attleboro city, Berkeley, Dartmouth, Dighton, Fairhaven, Fall river City, Freetown, Marion, Mansfield, New Bedford City, North Attleboro, Norton, Raynham, Rehoboth, Seekonk, Somerset, Swansea, Taunton City and Westport); DUKES; NANTUCKET; NORFOLK (Bellingham, Franklin, Plainville, and Wrentham); PLYMOUTH (Lakeville, Mattapoisett, Middleboro, Rochester and Wareham)

	Rates	Fringes
Insulator/asbestos worker (Includes the application of all insulating materials, protective coverings, coatings and finishes to all types of mechanical systems.)	$ 41.48	27.50

BOIL0029-001 01/01/2017

	Rates	Fringes
BOILERMAKER	$ 42.42	24.92

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* BRMA0001-008 09/01/2017

FOXBORO CHAPTER
BRISTOL (Attleboro, Berkley, Dighton, Mansfield, North Attleboro, Norton, Raynham, Rehoboth, Seekonk, Taunton) AND NORFOLK (Bellingham, Canton, Dedham, Foxboro, Franklin, Norfolk, Norwood, Plainville, Sharon, Walpole, Westrwood, Wrentham) COUNTIES

	Rates	Fringes
Bricklayer, Cement Mason, Plasterer	$ 49.96	31.36

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* BRMA0001-009 09/01/2017

LOWELL CHAPTER
MIDDLESEX (Acton, Asby, Ayer, Bedford, Billerica, Boxboro, Carlisle, Chemsford, Dracut, Dunstble, Ft. Denvens, Groton, Littleton, Lowell, North Acton, Pepperell, Shirley, South Acton, Tewksbury, Townsend, Tyngsboro, West Acton, Westford, Wilmington)

	Rates	Fringes
Bricklayer and plasterer	$ 49.96	31.36

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* BRMA0001-010 09/01/2017

LOWELL CHAPTER
MIDDLESEX (Ashland, Framingham, Holliston, Hopkinton, Hudson, Maynard, Natick, Sherbvorn, Stow); and NORFOLK (Medfield, Medway,Millis)

	Rates	Fringes
BRICKLAYER	$ 49.96	31.36

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* BRMA0003-001 08/01/2017

	Rates	Fringes
Marble & Tile Finisher	$ 39.82	30.25
Marble, Tile & Terrazzo Workers	$ 52.10	32.09
TERRAZZO FINISHER	$ 51.00	31.93

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* BRMA0003-003 08/01/2017

BOSTON CHAPTER
MIDDLESEX (Arlington, Cambridge, Everett, Malden, Medford, Melrose, Somerville); NORFOLK (Brookline, Milton); and SUFFOLK

	Rates	Fringes
BRICKLAYER	$ 52.06	32.14

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* BRMA0003-006 08/01/2017

LYNN CHAPTER
ESSEX (Amesbury, Andover, Beverly, Boxford, Danvers, Essex, Georgetown, Gloucester, Groveland, Hamilton, Haverhill, Ipsewich, Lawrence, Lynn, Lynnfield, Manchester, Marblehead, Merrimac, Methuen, Middleton, Nahant, Newbury, Newburyport, North Andover, Peabody, Rockport, Rowley, Salisbury, Salem, Saugus, Swampscott, Topsfield Wakefield, Wenham, West Newbury); and MIDDLESEX (Reading, North Reading, Wakefield)

	Rates	Fringes
Bricklayer, cement mason and plasterer	$ 52.06	32.14

32.14

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* BRMA0003-007 08/01/2017

WALTHAM CHAPTER
MIDDLESEX (Belmont, Burlington, Concord, Lexington, Lincoln, Stoneham, Sudbury, Waltham, Watertown, Wayland, Weston, Winchester, Woburn)

	Rates	Fringes
Bricklayer and plasterer	$ 52.06	32.14

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* BRMA0003-008 08/01/2017

NEWTON CHAPTER
MIDDLESEX (Newton) and NORFOLK (Dover, Needham, Wellesley)

	Rates	Fringes
Bricklayer, cement mason and plasterer	$ 52.06	32.14

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* BRMA0003-009 08/01/2017

NEW BEDFORD
BARNSTABLE; BRISTOL (Acushnet, Darmouth, Farhaven, Fall River, Freetown, New Bedford, Somerset, Swansea, Westport); DUKES; and NANTUCKET COUNTIES

	Rates	Fringes
Bricklayer, cement mason and plasterer	$ 52.06	32.14

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* BRMA0003-010 08/01/2017

QUINCY CHAPTER
NORFOLK COUNTY (Avon, Braintree, Cohasset, Holbrook, Quincy,

Randolph, Soughton, Weymouth)

	Rates	Fringes
Bricklayer, cement mason and plasterer	$ 52.06	32.14

CARP0026-001 09/01/2017

BRISTOL (Attleborough, North Attleborough); ESSEX; MIDDLESEX (Except Belmont, Cambridge, Everett, Malden, Medford, Somerville); AND NORFOLK (Bellingham, Canton, Foxboro, Franklin, Medfield, Medway, Millis, Needham, Norfolk, Norwood, Plainville, Sharon, Walpole, Wellesley, Westwood, Wrentham)

	Rates	Fringes
CARPENTER	$ 39.28	27.90

CARP0033-001 09/01/2017

MIDDLESEX (Belmont, Cambridge, Everett, Malden, Medford, Somerville); NORFOLK (Brookline, Dedham, Milton); and SUFFOLK

	Rates	Fringes
CARPENTER	$ 46.43	28.35

CARP0056-011 08/01/2015

SUFFOLK (All of County); and those areas of BARNSTABLE, BRISTOL, ESSEX, MIDDLESEX & NORFOLK COUNTIES situated inside Boston Beltway (I-495) and North of Cape Cod Canal. ALL of DUKES AND NANTUCKET COUNTIES

	Rates	Fringes
PILEDRIVERMAN	$ 42.04	29.73

CARP0056-012 08/01/2015

The areas of BARNSTABLE, BRISTOL, and NORFOLK COUNTIES situated OUTSIDE Boston Beltway (I-495) and South of Cape Cod Canal

	Rates	Fringes
PILEDRIVERMAN	$ 42.04	29.73

CARP0056-013 08/01/2015

Those areas of ESSEX and MIDDLESEX COUNTIES situated OUTSIDE Boston Beltway (I-495)

	Rates	Fringes
PILEDRIVERMAN	$ 42.04	29.73

CARP0424-003 09/01/2017

NORFOLK COUNTY (Braintree, Cohassett, Scituate, Weymouth, Quincy)

	Rates	Fringes
CARPENTER	$ 39.28	27.90

CARP0624-005 09/01/2017

DUKES; NANTUCKET

	Rates	Fringes
CARPENTER	$ 46.43	28.35

CARP0624-007 09/01/2017

BARNSTABLE; BRISTOL (Except Attleboro & North Attleboro); AND NORFOLK (Avon, Holbrook, Randolph, Stoughton) COUNTIES

	Rates	Fringes
CARPENTER	$ 39.28	27.90

CARP1121-001 10/01/2017

	Rates	Fringes
MILLWRIGHT	$ 39.52	30.85

CARP2168-001 09/01/2016

MIDDLESEX (Belmont, Cambridge, Everett, Malden, Medford, Somerville); NORFOLK (Brookline, Dedham, Milton); and SUFFOLK

	Rates	Fringes
FLOOR LAYER: Carpet	$ 42.65	28.32

CARP2168-004 09/01/2016

BRISTOL; ESSEX; MIDDLESEX (Except Belmont, Cambridge, Everett, Malden, Medford, Somerville); Remainder of Norfolk County

	Rates	Fringes
FLOOR LAYER: Carpet	$ 42.65	28.32

CARP2168-005 09/01/2016

BARNSTABALE; DUKES; AND NANTUCKET

	Rates	Fringes
FLOOR LAYER: Carpet	$ 42.65	28.32

ELEC0096-001 12/01/2017

MIDDLESEX (Ashby, Ashland, Ayer, Ft. Devens, Groton, Hopkinton, Hudson, Marlboro, Pepperell, Shirley, Stow, Townsend)

	Rates	Fringes
ELECTRICIAN	$ 42.32	11%+20.06
Teledata System Installer	$ 29.04	23.04

ELEC0099-001 06/01/2017

BRISTOL (Attleboro, North Attleboro, Seekonk)

	Rates	Fringes
ELECTRICIAN	$ 38.08	57.24%
Teledata System Installer	$ 28.56	13.1%+13.76

ELEC0103-001 03/01/2017

ESSEX; MIDDLESEX (Excluding Ashby, Ashland, Ayer, Ft. Devens, Groton, Hopkinton, Hudson, Marlboro, Pepperell, Shirley, Stow, Townsend); NORFOLK (Excluding Avon, Holbrook, Plainville, Randolph, Stoughton) SUFFOLK

	Rates	Fringes
Teledata System Installer	$ 36.25	29.14

ELEC0103-002 03/01/2017

ESSEX (Amesbury, Andover, Boxford, Georgetown, Groveland, Haverhill, Lawrence, Merrimac, Methuen, Newbury, Newburyport, North Andover, Rowley, Salisbury, West Newbury); MIDDLESEX (Bedford, Billerica, Boxboro, Burlington, Carlisle, Chelmsford, Dracut, Dunstable littleton, Lowell, North Reading, Tewksbury, Tyngsboro, Westford, Wilmington)

	Rates	Fringes
ELECTRICIAN	$ 48.33	31.17

ELEC0103-004 03/01/2017

ESSEX (Beverly, Danvers, Essex, Gloucester, Hamilton, Ipswich, Manchester, Marblehead, Middleton, Peabody, Rockport, Salem, Topsfield, Wenham)

	Rates	Fringes
ELECTRICIAN	$ 48.33	31.17

ELEC0103-005 03/01/2017

ESSEX (Lynn, Lynnfield, Nahant, Saugus, Swampscott); MIDDLESEX (Acton, Arlington, Belmont, Cambridge, Concord, Everett, Framingham, Holliston, Lexington, Lincoln, Malden, Maynard, Medford, Melrose, Natick, Newton, Reading, Sherborn, Somerville, Stoneham, Sudbury, Wakefield, Waltham, Watertown, Wayland, Weston, Winchester, Woburn); NORFOLK (Bellingham, Braintree, Brookline, Canton, Cohasset, Dedham, Dover, Foxboro, Frankloin, Medfield, Medway, Millis, Milton, Needham, Norfolk,

Norwood, Quincy, Sharon, Walpole, Wellesley, Westwood, Weymouth, Wrentham); PLYMOUTH (Hingham and Hull);SUFFOLK

	Rates	Fringes
ELECTRICIAN	$ 48.33	31.17

ELEC0104-001 09/03/2017

	Rates	Fringes
Line Construction:		
Cableman	$ 38.45	18.42+A
Equipment Operator	$ 38.45	22.50+A
Groundman	$ 24.88	10.24+A
Lineman	$ 45.23	25.71+A

A. PAID HOLIDAYS: New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; Christmas Day and Columbus Day, provided the employee has been employed 5 working days prior to any one of the listed holidays.

ELEC0223-005 09/01/2017

BARNSTABLE; BRISTOL (Except Attleboro, North Attleboro, Seekonk); DUKES; NANTUCKET AND NORFOLK (Avon, Halbrook, Plainville, Randolph, Stoughton)

	Rates	Fringes
ELECTRICIAN	$ 39.81	28.23%+10.90

ELEC0223-006 09/01/2017

BARNSTABLE; BRISTOL (Except Attleboro, North Attleboro, Seekonk); DUKES; NANTUCKET AND NORFOLK (Avon, Halbrook, Plainville, Randolph, Stoughton)

	Rates	Fringes
Teledata System Installer	$ 33.78	28.38%+10.65

ELEV0004-001 01/01/2017

	Rates	Fringes
ELEVATOR MECHANIC	$ 55.86	31.585+a+b

FOOTNOTE FOR ELEVATOR MECHANICS:

a.Vacation: 6%/under 5 years based on regular hourly rate for all hours worked. 8%/over 5 years based on regular hourly rate for all hours worked.
b. PAID HOLIDAYS: New Year's Day; Memorial Day; Independence Day; Labor Day; Veterans' Day; Thanksgiving Day; the Friday after Thanksgiving Day; and Christmas Day.

ENGI0004-001 12/01/2017

	Rates	Fringes
Power equipment operators:		
Group 1	$ 46.63	26.90+A
Group 2	$ 46.17	26.90+A
Group 3	$ 31.80	26.90+A
Group 4	$ 38.57	26.90+A
Group 5	$ 23.24	26.90+A
Group 6	$ 27.40	26.90+A

FOOTNOTE FOR POWER EQUIPMENT OPERATORS:
A. PAID HOLIDAYS: New Year's Day, Washington's Birthday, Labor Day, Memorial Day, Independence Day, Patriot's Day, Columbus Day, Veteran's Day, Thanksgiving Day, Christmas Day

HOURLY PREMIUM FOR BOOM LENGTHS (Including Jib):
Over 150 ft. +2.12
Over 185 ft. +3.72
Over 210 ft. +5.23
Over 250 ft. +7.92
Over 295 ft. +10.97
Over 350 ft. +12.76

POWER EQUIPMENT OPERATORS CLASSIFICATIONS
Group 1: Crane; shovel; truck crane; cherry picker; dragline; trench hoe; backhoe; three drum machine; derrick; pile driver; elevator tower; hoist; gradall; shovel dozer; front end loader; fork lift; suger; boring machine; rotaryu drill; post hole hammer; post hole digger; pumpcrete machine; asphalt plant (on site); concrete batching and/or mixing plant (on site); crusher plant (on site); paving

concrete mixer; timber jack
Group 2: Sonic or vibratory hammer; grader; scraper; tandem scraper; concrete pump; bulldozer; tractor; york rake; mulching machine; portable steam boiler; portable steam generator; roller; spreader; tamper (self propelled or tractor drawn); asphalt paver; mechanic - maintenance; paving screed machine; stationary steam boiler; paving concrete finishing machine; cal truck; ballast regulator; switch tamper; rail anchor machine; tire truck
Group 3: Pumps (1-3 grouped); compressor; welding machine (1-3 grouped); generator; concrete vibrator; heater (power driven 1- 5); well point system (operating); syphon-pulsometer; concrete mixer; valves controlling permanent plant air or steam; conveyor; Jackson type tamper; single diaphragm pump; lighting plant
Group 4: Assistant engineer (fireman)
Group 5: Oiler (other than truck cranes and gradalls)
Group 6: Oiler (on truck cranes and gradalls) stant engineer (on truck crane and gradall)

IRON0007-006 09/16/2017

AREA 1: BRISTOL (Easton); ESSEX (Beverly, Gloucester, Lynn,Lynnfield, Manchester, Marblehead, Nahant, Rockport, Salem, Saugus, Swampscott); MIDDLESEX (Arlington, Bedford, Belmont, Burlington, Cambridge, Carlisle, Concord, Dunstable, Everett, Framingham, Lexington, Lincoln, Malden, Maynard, Medford, Melrose, Natick, Newton, Reading, Sherborn, Somerville, Stoneham, Sudbury, Wakefield, Waltham, Watertown, Wayland, Weston, Winchester, Woburn); NORFOLK (Except Medway); SUFFOLK

AREA 2: ESSEX (Amesbury, Andover, Boxford, Danvers, Essex, Georgetown, Hamilton, Haverhill, Ipswich, Lawrence, Merrimac, Methuen, Newbury, Newburyport, North Andover, Rowley, Salisbury, Topsfield, Wenham, West Newbury); MIDDLESEX (Action, Billericia, Chelmsford, Dracut, Groton, Groveland, Littleton, Lowell, Middleton, North Reading, Pepperell, Tewksbury, Tyngsboro, Westford, Wilmington)

	Rates	Fringes
Ironworkers:		
AREA 1	$ 44.71	30.56
AREA 2	$ 40.30	30.56

IRON0007-010 09/16/2017

MIDDLESEX (Ashby, Ashland, Ayer, Boxboro, Holliston, Hopkinton, Hudson, Marlboro, Shirley, Stow, Townsend); NORFOLK (Medway)

	Rates	Fringes
IRONWORKER	$ 44.41	30.56

IRON0037-005 09/16/2017

BARNSTABLE; BRISTOL (Acushnet, Attleboro, Berkley, Dartmouth, Dighton, Fairhaven, Fall River, Freetown, Mansfield, New Bedford, North Attleboro, Norton, Raynham, Rehoboth, Seekonk, Somerset, Swansea, Taunton, Westport); DUKES; NANTUCKET; NORFOLK (Billingham, Franklin, Plainville, Wrentham)

	Rates	Fringes
IRONWORKER	$ 34.89	26.87

LABO0014-001 12/01/2017

	Rates	Fringes
Plasterer tender BARNSTABLE, BRISTOL, DUKES, ESSEX, NANTUCKET, MIDDLESEX (with the exception of Arlington, Belmont, Burlington, Cambridge, Everett, Malden, Medford, Melrose, Reading, Somerville, Stoneham, Wakefield, Winchester, Winthrop and Woburn); NORFOLK (with the exception of Brookline Dedham and Milton) COUNTIES	$ 32.83	22.50
SUFFOLK COUNTY (Boston, Chelsea, Revere, Winthrop, Deer Island, Nut Island); MIDDLESEX COUNTY (Arlington, Belmont, Burlington, Cambridge, Everett, Malden, Medford,		

Melrose, Reading,
Somerville, Stoneham,
Wakefield, Winchester,
Winthrop and Woburn only);
NORFOLK COUNTY (Brookline,
Dedham, and Milton only)....$ 37.50 23.65

LABO0022-009 12/01/2017

SUFFOLK COUNTY (Boston, Chelsea, Revere, Winthrop, Deer & Nut Islands); MIDDLESEX COUNTY (Arlington, Belmont, Burlington, Cambridge, Everett, Malden, Medford, Melrose, Reading, Somerville, Stoneham, Wakefield, Winchester, Winthrop, and Woburn only); NORFOLK COUNTY (Brookline, Dedham, and Milton only)

	Rates	Fringes
Laborers:		
Group 1	$ 37.50	23.65
Group 2	$ 37.75	23.65
Group 3	$ 38.25	23.65
Group 4	$ 38.50	23.65
Group 5	$ 38.25	23.65
Group 6	$ 39.50	23.65
Group 7	$ 20.50	23.65

LABORERS CLASSIFICATIONS

GROUP 1: Laborers; Carpenter Tenders

GROUP 2: Jackhammer operator; pavement breaker; asphalt raker carbide core drilling machine; chain saw operator; pipelayer; barco type jumping tampers; laser beam; concrete pump; mason tender; motorized mortar mixer; ride-on motorized buggy; fence and beam rail erector

GROUP 3: Air track, block paver; rammer; curb setter, hydraulic and similar self-powered drills

GROUP 4: Blaster; powderman

GROUP 5: Pre-cast floor and roof plank erector

GROUP 6: Asbestos removal laborers/haz-mat laborers

GROUP 7: Flaggers

LABO0022-010 12/01/2017

Counties of BARNSTABLE; BRISTOL; DUKES; ESSEX; NANTUCKET; MIDDLESEX (with the exception of Arlington, Belmont, Burlington, Cambridge, Everett, Malden, Medford, Melrose, Reading, Somerville, Stoneham, Wakfield, Winchester, Winthrop and Woburn); NORFOLK (with the exception of Brookline, Dedham and Milton)

	Rates	Fringes
Laborers:		
Group 1	$ 32.83	22.50
Group 2	$ 33.08	22.50
Group 3	$ 33.58	22.50
Group 4	$ 33.83	22.50
Group 5	$ 33.58	22.50
Group 6	$ 34.83	22.50

LABORERS CLASSIFICATIONS

GROUP 1: Laborers; Carpenter Tenders

GROUP 2: Jackhammer operator; pavement breaker; asphalt raker carbide core drilling machine; chain saw operator; pipelayer; barco type jumping tampers; laser beam; concrete pump; mason tender; motorized mortar mixer; ride-on motorized buggy; fence and beam rail erector

GROUP 3: Air track, block paver; hammer; curb setter, hydraulic and similar self-powered drills

GROUP 4: Blaster; powderman

GROUP 5: Pre-cast floor and roof plank erector

GROUP 6: Asbestos removal laborers/haz-mat laborers

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* LABO1421-004 12/01/2017

BARNSTABLE, BRISTOL, DUKES, ESSEX, MIDDLESEX, NANTUCKET NORFOLK AND SUFFOLK COUNTIES

	Rates	Fringes
Laborers: (Wrecking)		
Group 1	$ 37.65	23.65
Group 2	$ 38.40	23.65
Group 3	$ 38.65	23.65
Group 4	$ 33.65	23.65
Group 5	$ 36.75	23.65
Group 6	$ 37.65	23.65

Group 1: Adzeman, Wrecking Laborer.
Group 2: Burners, Jackhammers.
Group 3: Small Backhoes, Loaders on tracks, Bobcat Type Loaders, Hydraulic "Brock" Type Hammer Operators, Concrete Cutting Saws.
Group 4: Yardman (Salvage Yard Only).
Group 5: Yardman, Burners, Sawyers.
Group 6: Asbestos, Lead Paint, Toxic and Hazardous Waste.

PAIN0011-007 06/01/2017

BARNSTABLE, BRISTOL, DUKES, AND NANTUCKET COUNTIES

	Rates	Fringes
GLAZIER	$ 36.28	20.45+A

FOOTNOTE:
A. PAID HOLIDAY: LABOR DAY (provided employee has worked any part of the week prior to Labor Day and any part of the week after Labor Day)

PAIN0035-004 01/01/2017

BARNSTABLE; BRISTOL; ESSEX; NANTUCKET; DUKES; COUNTIES; REMAINDER OF NORFOLK; MIDDLESEX AND SUFFOLK COUNTIES

	Rates	Fringes
Painters:		
NEW CONSTRUCTION:		
Brush, Taper	$ 37.86	28.10
Spray, Sandblast	$ 39.26	28.10
REPAINT:		
Brush, Taper	$ 35.92	28.10

Spray, Sandblast.....$ 37.32 28.10

PAIN0035-013 01/01/2017

MIDDLESEX (Cambridge, Everett, Malden, Medford, Somerville)
SUFFOLK COUNTY (Boston, Chelsea) NORFOLK COUNTY (Brookline)

	Rates	Fringes
Painters:		
NEW CONSTRUCTION:		
Brush, Taper	$ 43.65	28.10
Spray, Sandblast	$ 45.05	28.10
REPAINT:		
Brush, Taper	$ 41.71	28.10
Spray, Sandblast	$ 43.11	28.10

PAIN0035-020 01/01/2017

ESSEX; MIDDLESEX; NORFOLK; SUFFOLK

	Rates	Fringes
GLAZIER	$ 37.86	28.10

PLAS0534-001 01/01/2017

ESSEX; MIDDLESEX; NORFOLK AND SUFFOLK COUNTY

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 40.00	33.91

PLAS0534-004 01/01/2017

MIDDLESEX; NORFOLK AND SUFFOLK COUNTIES

	Rates	Fringes
PLASTERER	$ 40.00	33.91

PLUM0004-001 09/01/2017

MIDDLESEX (Ashby, Ayer-West of Greenville branch of Boston and
Maine Railroad, Ft. Devens, Groton, Shirley, Townsend)

	Rates	Fringes
Plumbers and Pipefitters.....	$ 43.41	25.51

PLUM0012-005 09/01/2017

ESSEX (Ames, Andover, Beverly, Boxford, Byfield, Danvers, Essex, Georgetown, Gloucester, Groveland, Hamilton, Haverhill, Ipswich, Lawrence, Manchester, Marblehead, Merrimac, Methuem, Middleton, Newbury, Newburyport, North Andover, Peabody, Rockport, Rowley, Salem, Salisbury, Topsfield, Wenham, West Newbury)

	Rates	Fringes
PLUMBER.....	$ 49.86	28.18

PLUM0012-007 09/01/2017

ESSEX (Lynn, Lynnfield, Nahant, Saugus, and Swampscott); MIDDLESEX (Acton, Arlington, Ashford, Ayer-except west of Greenville Branch of Boston & Maine Rail Road, Bedford, Belmont, Billerica, Boxboro, Burlington, Cambridge, Carlise, Chelmsford, Concord, Dracut, Dunstable, Everett, Framingham, Hudson, Holliiston, Hopkinton, Lexington, Lincoln, Littleton, Lowell, Malden, Marlboro, Maynard, Medford, Melrose, Natick, Newton, North Reading, Pepperell, Reading, Sherborn, Somerville, Stoneham, Stow, Sudbury, Tewksbury, Tyngsboro, Wakefield, Watham, Watertown, Wayland, Westford, Wilmington, Winchester and Woburn), NORFOLK (Bellingham, Braintree, Brookline, Canton, Cohasset, Dedham, Dover, Foxboro, Franklin, Medford, Medway, Millis, Milton, Needham, Norfolk, Norwood, Plainville, Quincy, Sharon, Walpole, Wellesley, Westwood, Weymouth and Wrentham); PLYMOUTH (Hingham, Hull, Scituate); SUFFOLK; WORCESTER (Hopedale and Southboro)

	Rates	Fringes
PLUMBER.....	$ 53.94	28.18

PLUM0051-004 09/01/2016

BARNSTABLE; BRISTOL; DUKES; NANTUCKET; AND NORFOLK (Avon, Holbrook, Randolph, Stoughton) COUNTIES

	Rates	Fringes
Plumbers and Pipefitters.....	$ 38.38	28.20

PLUM0537-005 09/01/2016

ESSEX (Ames, Andover, Beverly, Boxford, Byfield, Danvers, Essex, Georgetown, Gloucester, Groveland, Hamilton, Haverhill, Ipswich, Lawrence, Lynn, Lynnfield, Manchester, Marblehead, Merrimac, Methuem, Middleton, Nahant, Newbury, Newburyport, North Andover, Peabody, Rockport, Rowley, Salem, Salisbury, Saugus, Swampscott,Topsfield, Wenham, West Newbury); MIDDLESEX (Acton, Arlington, Ashford, Ayer-except west of Greenville Branch of Boston & Maine Rail Road, Bedford, Belmont, Billerica, Boxboro, Burlington, Cambridge, Carlise, Chelmsford, Concord, Dracut, Dunstable, Everett, Framingham, Hudson, Holliiston, Hopkinton, Lexington, Lincoln, Littleton, Lowell, Malden, Marlboro, Maynard, Medford, Melrose, Natick, Newton, North Reading, Pepperell, Reading, Sherborn, Somerville, Stoneham, Stow, Sudbury, Tewksbury, Tyngsboro, Wakefield, Watham, Watertown, Wayland, Westford, Wilmington, Winchester and Woburn), NORFOLK (Bellingham, Braintree, Brookline, Canton, Cohasset, Dedham, Dover, Foxboro, Franklin, Medford, Medway, Millis, Milton, Needham, Norfolk, Norwood, Plainville, Quincy, Sharon, Walpole, Wellesley, Westwood, Weymouth and Wrentham); PLYMOUTH (Hingham, Hull, Scituate); SUFFOLK; WORCHESTER (Hopedale and Southboro)

	Rates	Fringes
PIPEFITTER.....	$ 50.19	29.76

ROOF0033-001 08/01/2017

	Rates	Fringes
Roofers:		
All Tear-off and/or removal of any types of roofing and all spudding, sweeping, vacuuming and/or cleanup of any and all areas of any type where a roof is to be relaid.....	$ 41.36	26.65

SFMA0550-001 10/01/2017

BRISTOL (Portion within 35 mile radius from Boston City Hall; ESSEX; MIDDLESEX (Except Ashby, Townsend, and portions of Pepperell and Shirley beyond 35 mile radius from Boston City Hall); NORFOLK; PLYMOUTH (Portion within 35 mile radius of Boston City Hall); SUFFOLK

	Rates	Fringes
SPRINKLER FITTER	$ 57.58	26.78+a

a. PAID HOLIDAYS: Memorial Day, July 4th, Labor Day, Thanksgiving Day and Christmas Day, provided the employee has been in the employment of a contractor 20 working days prior to any such paid holiday.

SFMA0550-002 10/01/2017

BRISTOL (Seekonk, Swansea, and Somerset)

	Rates	Fringes
SPRINKLER FITTER	$ 51.82	26.78+a

a. PAID HOLIDAYS: Memorial Day, July 4th, Labor Day, Thanksgiving Day and Christmas Day, provided the employee has been in the employment of a contractor 20 working days prior to any such paid holiday.

SFMA0669-001 04/01/2017

BARNSTABLE; BRISTOL (Beyond 35 mile radius of Boston City Hall); DUKES; MIDDLESEX (Ashby, Townsend, portions of Pepperell and Shirley beyond 35 mile radius of Boston City Hall); NANTUCKET; PLYMOUTH (Beyond 35 mile radius of Boston City Hall)

	Rates	Fringes
SPRINKLER FITTER	$ 40.26	15.84

SHEE0017-003 10/01/2015

BRISTOL (Attleboro, Berkley, Easton, Mansfield, North Attleboro, Norton, Raynham, Taunton); ESSEX; MIDDLESEX; NORFOLK; PLYMOUTH (except except Marion, Mattapoisett,

Rochester, Wareham); SUFFOLK

	Rates	Fringes
Sheet metal worker.....	$ 35.60	30.05

SHEE0017-007 10/01/2015

BARNSTABLE; BRISTOL (Acushnet, Assonet, Dartmouth, Dighton, Fairhaven, Fall River, Freetown, New Bedford, Rehoboth, Seeekonk, Somerset, Swansea, Westport); DUKES; AND NANTUCKET

	Rates	Fringes
Sheet metal worker.....	$ 35.60	30.05

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* TEAM0379-001 12/01/2017

	Rates	Fringes
Truck drivers:		
Group 1.....	$ 32.48	24.27+A+B
Group 2.....	$ 32.65	24.27+A+B
Group 3.....	$ 32.72	24.27+A+B
Group 4.....	$ 32.84	24.27+A+B
Group 5.....	$ 32.94	24.27+A+B
Group 6.....	$ 33.23	24.27+A+B
Group 7.....	$ 33.52	24.27+A+B

POWER TRUCKS $.25 DIFFERENTIAL BY AXLE
TUNNEL WORK (UNDERGROUND ONLY) $.40 DIFFERENTIAL BY AXLE
HAZARDOUS MATERIALS (IN HOT ZONE ONLY) $2.00 PREMIUM

TRUCK DRIVERS CLASSIFICATIONS

Group 1: Station wagons; panel trucks; and pickup trucks

Group 2: Two axle equipment; & forklift operator

Group 3: Three axle equipment and tireman

Group 4: Four and Five Axle equipment

Group 5: Specialized earth moving equipment under 35 tons other than conventional type trucks; low bed; vachual;

mechanics, paving restoration equipment

Group 6: Specialized earth moving equipment over 35 tons

Group 7: Trailers for earth moving equipment (double hookup)

FOOTNOTES:

A. PAID HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Patriot's Day, Columbus Day, Veteran's Day, Thanksgiving Day and Christmas Day

B. PAID VACATION: Employees with 4 months to 1 year of service receive 1/2 day's pay per month; 1 week vacation for 1 - 5 years of service; 2 weeks vacation for 5 - 10 years of service; and 3 weeks vacation for more than 10 years of service

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses

(29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007

in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal

process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION