

February 21, 2013

## SAFETY AND HEALTH DURING CONSTRUCTION ACTIVITIES

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### I. PURPOSE

To establish policy and procedures to ensure that construction projects will be planned, coordinated and regularly inspected to ensure compliance with applicable fire, infection control, environmental, security, safety and occupational health regulations and policies.

### II. POLICY

In order to protect patients, staff, visitors and contractors from safety and health hazards associated with construction activities, this policy is established for the VA Pittsburgh Healthcare System (VAPHS) and for all property where construction is undertaken.

### III. PROCEDURES

A. This policy requires that strategies be established to control the hazards inherent in conducting construction or maintenance operations in areas that are occupied by patients, visitors or healthcare staff. These strategies include the assignment of appropriate responsibility at all levels of the organization, establishing and maintaining the necessary expertise to manage an effective construction health and safety program, applying technical guidance and best practices to assist in managing the program and providing a construction safety multi-disciplinary team to oversee and enforce the application of this policy.

B. Construction activities shall be defined to include delegated minor or non-recurring maintenance projects performed by contractors or purchase and hire personnel, as well as station-level projects performed by contractors, purchase and hire personnel or station Maintenance and Operations (M&O) personnel. Construction shall also include non-delegated projects including majors, and VAPHS shall coordinate those construction impacts with the project's Resident Engineer through the VP, Facilities Management Service or designee single point of contact. This definition also applies to enhanced-use and lease projects

related to structures for which VAPHS maintains management responsibility or authority.

C. The intention of this construction safety program is to reduce the potential for injury and illness to VA patients, employees and visitors that might result from unsafe construction activities; to increase the level of construction safety expertise of VA employees; to decrease the potential for serious Occupational Safety and Health Administration (OSHA) violations; to provide a guideline for addressing safety-related construction issues; and to reduce the potential for property and liability exposures due to construction-related activities.

D. Proper application of this program will reduce the potential for liability, which could result from construction accidents, life safety deficiencies or infection control failures.

E. Design Review

1. The Contracting Officer Representative (COR) will make available to the safety/infection control staff, the technical plans and specifications for construction projects in accordance with the design review schedule, as written in the contract. The design review schedule will be established to afford the safety/infection control staff sufficient time to perform the review.

2. The safety/infection control staff will assist the project manager to identify special safety or health training requirements that must be met by the contractor or vendor, such as pre-construction training and/or periodic training. They shall monitor the need for specialized training and shall coordinate such training with the COR or project manager.

3. The VISN Safety & Fire Protection Engineer and infection control staff, in conjunction with the project manager, will evaluate the need for ILSMs or ICRA requirements using The Joint Commission current criteria or CDC guidelines, and implement accordingly.

4. The Interim Life Safety Measures (ILSM) guidelines, procedures, and matrix can be found in Attachment C.

5. The Infection Control Risk Assessment (IRCA) guidelines, procedures, and matrix can be found in Attachment D.

6. A current copy of EC-051 shall be included in the Construction Documents scope of work for all construction projects.

F. Construction Contract Submittals. The COR and safety staff will review the submittal list to identify those items that are key to VA staff safety, patient or

visitor safety and any regulatory compliance and the safety/infection control staff will ensure, within an agreeable timeframe, those targeted submittals are reviewed for completeness and accuracy.

G. Pre-Construction Meetings. A meeting of the COR, safety/infection control staff and contractor or subcontractors must be held prior to initiation of work to review the contractor plans to address the ILSM and ICRA measures, and to ensure everyone is familiar with their role for the following:

1. Identification of the contractor and the subcontractor CP(s).
2. Identification of local, state and federal safety and environmental regulations that are in effect and applicable during the construction; e.g., OSHA, EPA, National Fire Protection Association (NFPA) and VA regulations, hot work permits, fire detection and suppression system disruptions, etc.
3. Review of all ILSM or ICRA requirements that apply to the phase or phases of the contract, and/or establish periodic review.
4. The Pre-Construction Risk Assessment/Safety Construction (PCRA) shall be completed during the Pre-Construction meeting to ensure the Environment of Care level is maintained as listed in the General Requirements specification. The PCRA Permit can be found in Attachment E.
5. Items for discussion during the Pre-Construction Meetings are identified on Attachment A, Pre-Construction Meeting Checklist.
6. The Contract Workers Safety Information guidelines, checklists, and permits are provided in Attachment B.

H. Construction Site Oversight and Inspections. The VA will provide site oversight and inspections to ensure the welfare of the patients, visitors, staff and /or environment.

1. Construction activities must not take place without appropriate VA oversight. This VA responsibility must be conducted by staff on duty and located on the property in which the construction activities are taking place. Should the project manager not be available to provide this oversight, a replacement will be designated. The replacement shall have sufficient time and ability to perform such duties, and shall have the same level of authority as the project manager of the project.
2. The project manager shall visit the site daily, conduct a safety/health inspection of the construction site, and document the findings as needed. The project manager shall make all documents

available for review by the CO, safety staff, or other regulatory agency representative.

3. The safety/infection control staff must inspect the site daily to ensure continuous compliance, and shall document the findings. All documents shall be available to regulatory agency representatives upon request.

I. Construction Site Activity Intervention.

1. All work must be immediately stopped should the COR, project manager, infection control or safety staff identify activities that could reasonably be expected to cause death or serious physical harm immediately or before the imminence of such danger can be eliminated.

2. Unresolved safety issues, including continuous and/or repetitive deficiencies that are the cumulative effect, may represent a more serious safety concern and will be brought to the attention of the COR for resolution.

a. At a minimum, the Contracting Officer (CO) must notify the contractor in writing of noncompliance with life safety, OSHA, environmental and infection control standards requiring timely corrective action.

b. Repeated contractor failure to correct hazards or blatant disregard for safety and environment will not be tolerated. Lack of cooperative action by the contractor will result in increasing pressure to comply, including contact of government enforcement agencies of job safety and the environment.

J. Infection Control. Contractors must strictly adhere to infection control measures to control the generation of dust, and provide for the containment of the dust in and around patient care areas, supplies and equipment during all phases of the construction.

1. Where possible, the construction area of risk levels 3 and 4 shall be under negative pressure, ensuring there is an appreciable flow of clean air from the VA occupied area into the demolition/construction area.

2. Construction debris transported through the VA occupied portion of the buildings shall be covered, and carts will be wiped down or vacuumed to reduce the transporting of dust and contamination from construction areas to occupied areas. Higher risk areas to be avoided if possible.

3. Construction employees shall remove or cover dust-laden clothing before entering the VA occupied portion of the facility when practical.

4. Carpet/sticky mats shall be placed at all construction site entrances and satisfactorily maintained so as to minimize the tracking of dust into the VA occupied portion of the buildings.

5. Dry sweeping of dust and debris may only be performed in a manner that does not create a dust issue in the VA occupied portion of the buildings.

K. Post-Construction Survey.

1. The COR, project manager, safety/infection control staff, Environment Management Systems (EMS) staff or others shall conduct a post construction survey of the site to ensure compliance and functionality of all building components and systems. Punch lists shall be developed and tracked for completion by the project manager.

2. Facility safety/infection control staff and the VISN Safety & Fire Protection Engineer shall be offered a pre-occupancy inspection for those projects.

IV. RESPONSIBILITY

A. Director

1. Establish and monitor an effective facility construction safety program.

2. Establish a multidisciplinary team (Construction Safety Committee) with representatives from the following program areas:

- a. Infection Control
- b. Patient Safety
- c. Occupational Safety and Health
- d. Police
- e. Engineering
- f. Local Union Safety Representatives (from affected bargaining units)
- g. Contracting
- h. Green Environmental Management Systems (GEMS)

3. Insure appropriate staff receives training in construction safety.

4. Insure Competent Persons (CPs) are designated who have the necessary training, experience and authority to carry out their responsibilities with respect to safety and health during construction activities.

NOTE: OSHA Title 29 Code of Federal regulations (CFR) 1926.32(f) states “competent person means 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.”

Qualified VA staff must be appointed to serve as CP for construction work performed by VA employees. The name and qualifications of the CP must be identified in writing and noted in the minutes of the facility safety committee (or equivalent body) responsible for the safety management functions as defined under The Joint Commission Environment of Care Standard.

5. Insure the Construction Safety Committee functions to:
  - a. Protect patients, visitors, and employees from traumatic injury, as well as occupational and facility-associated infections.
  - b. Oversee compliance with OSHA and state construction safety regulations.
  - c. Oversee compliance with Environmental Protection Agency (EPA) and state environmental regulations.
  - d. Respond to, investigate and report violations of these policies to upper management.
6. Develop and implement a written facility policy addressing the responsibilities of the Construction Safety Committee.
7. Insure that VA staff receives training as follows:
  - a. Appointed CPs, Contracting Officer's Technical Representatives CORs and facility Safety Program Managers complete OSHA's 30-hour construction safety course.
  - b. Engineering supervisors and foremen who oversee construction work complete OSHA's 10-hour or 30-hour construction safety course.
8. Ensures multidisciplinary participation as necessary with respect to the nature of hazards associated with the construction project(s). Participation may change as the project progresses.
9. Ensures appropriate staff receives training in construction safety including specified construction safety 10-hour and 30-hour courses.

- B. Associate Director: Receives delegated responsibility from the Director, as appropriate, for oversight of these policies.
- C. VP, Facilities Management Service:
  - 1. Receives delegated responsibility from the Associate Director, as appropriate, for oversight of these policies.
  - 2. Insures policies are addressed by all sections of engineering having oversight of construction.
- D. Projects Section Manager:
  - 1. Works through safety and health staff, CORs maintenance staff, contractors and the Construction Safety Committee to plan, coordinate and monitor the construction safety program for all projects at the facility.
  - 2. Participates in OSHA's 30-hour construction safety training and refresher courses. Ensures all project staff is in compliance.
  - 3. Participates in periodic inspections of construction sites to ensure compliance with safety elements of the construction contract and performance of the program.
  - 4. Chairs the Construction Safety Committee and ensures contract requirements meet the committee's approval.
  - 5. Supports the CPs, VISN Safety & Fire Protection Engineer, Infection Control Practitioner, Contracting Officer and engineering staff in implementation of the construction safety program.
  - 6. Works with contracting staff to insure competent staff are assigned as CORs to oversee work.
- E. Engineering Program Manager:
  - 1. Participates in OSHA's 10-hour construction safety training and refresher courses. Ensures all employees are in compliance.
  - 2. Participates in periodic inspections of in-house construction sites to ensure compliance with safety elements of the construction contract and performance of the program.
  - 3. Insures in-house work forces have necessary training and competency for tasks being performed.

F. Chief of Biomedical Engineering: Ensures all construction accomplished in support of major equipment installations (as a part of the equipment purchase) are in compliance with this policy and these procedures.

G. Acquisition & Materiel Management Officer:

1. Participates in OSHA's 10-hour construction safety training and refresher courses shall be encouraged. Ensures all Contracting Officers are in compliance with the training.
2. Ensures safety elements of this policy are included in each construction contract.
3. Evaluates past safety records of prospective contractors and considers this information in the contract award process.
4. Serves as the single designee on the Construction Safety Committee ensuring contracts meet the committee's requirements.
5. Supports the CP, VISN Safety & Fire Protection Engineer, Resident Engineer, COR, and appropriate staff in implementing the construction safety program.
6. Ensures that construction contracts awarded after July 31, 2005, specify that on-site general and sub-contractor's construction workers have completed the OSHA 10-hour construction worker course, the 30-hour construction course, or other relevant competency training, as determined by the VA CP with input from the Construction Safety Committee. The determination for training is based on the project hazards and complexity, State and Federal regulations and VA requirements.
7. Notifies the contractor in writing of any noncompliance with life safety, OSHA, environmental and infection control standards, and requiring timely action.
8. Initiates any appropriate penalties or actions as specified in the contract should the contractor fail to take appropriate action.
9. Provides technical support to the safety staff, infection control staff and other related parties on the interpretation of contract language relative to safety requirements.
10. Ensures that the contractor meets and documents any required safety and health inspection activities.

H. Contracting Officer's Representative (COR) VA Competent Person):



1. Participates in OSHA's 30-hour construction safety training program and refresher courses.
2. Is trained and designated as a CP for the purposes of this policy.
3. The team member most familiar with the technical aspects of his/her designated project, inspects his/her project on a daily basis to identify and documents deficiencies in the work including safety and infection control. Acts to correct deficiencies on-the-spot whenever possible.
4. Reports all deficiencies to the multi-disciplinary team whether corrected or not. Providing timely verbal or written notification to the CO, Safety Manager, infection control staff or other disciplines of any identified safety issues.
5. Reviews project with Infection Control Program Manager.
6. Consults with other members of the team, as appropriate, to assure that all deficiencies are handled properly.
7. Consults with member of the team, during design or planning to establish the risks to be addressed and the degree of protection appropriate to the situation.
8. Monitors compliance with relevant safety and health requirements by the contractor in the field. Performing and documenting daily work site safety and health inspections as they pertain to the welfare of patients, visitors and staff.
9. Keeps the Safety Manager informed of where and when construction will be taking place, as well as the general nature of the work to be performed.
10. Reviews the project design and becomes familiar with the processes a contractor will use to complete the project.
11. Provides technical assistance to the CO, safety or infection control staff relative to construction and contract requirements. Reviewing submitted contractor documentation.
12. Coordinates the temporary shutdown of vital equipment and utilities that may impact on patient care, VA employee safety or contractor safety.
13. Ensures the security of the construction site is maintained, and that signs are clearly posted to restrict unauthorized access.

I. Safety Manager:

1. Participates in OSHA's 30-hour construction safety training and refresher courses.
2. Ensures that VHA policy for the construction safety program is implemented within the VAPHS.
3. Ensures necessary and relevant ILSMs (Interim Life Safety Measures) are established and implemented. Conducts required additional training for compliance with identified ILSMs.
4. Renders technical advice and assistance as required in connection with life safety and fire protection issues during construction and project design and development.
5. Oversees compliance with OSHA and other relevant construction safety regulations.
6. Insures veterans affairs medical center (VAMC) staff receives training required by this memorandum.
7. Insures the construction safety program includes appropriate periodic construction site hazard surveillance.
8. Serves as the delegation of authority to immediately stop any observed construction activity that may pose an imminent danger. Such actions require an immediate notice to the CO and project manager.

J. Infection Control Program Manager:

1. Participates in OSHA's 10-hour construction safety training program and refresher courses.
2. Advises and/or provides recommendations on exposure mitigation and the prevention of facility associated infections in patients, staff, and visitors.
3. Ensures infection control staff participates in the pre-construction briefings and other forums to review safety responsibilities, contractor safety plans and VA safety requirements associated with the project.
4. Coordinates with the manager of each construction project (in-house and contract) to conduct an Infection Control Risk Assessment (ICRA) during the planning and/or design stage of the work. ICRA's must be documented in writing and focus on eliminating, or minimizing, the risk of infection during construction and renovation activities.

5. Monitors infection control during construction activities as indicated in ICRA for that project. Has the authority to immediately stop construction activity deemed to be a dangerous or potentially dangerous infection control issue (will immediately notify project COR of this action).

K. GEMS Coordinator:

1. Provides guidance on environmental issues during design stage.
2. Monitors contractor conformance to contract specifications, including environmental compliance and pollution prevention. The Supervisory Project Engineer or designee will give quarterly reports to the GEMS Committee to update the Committee on contractor compliance with environmental protection and pollution prevention standards.

I. The Construction Safety Committee (Multi-Disciplinary Team):

1. Meets monthly and files reports to the Environment of Care Safety Committee.
2. Determines the scope and depth of safety, infection control, environmental and security procedures appropriate for all construction work.
3. Develops threshold criteria for each level of intervention. For example, after review, some projects may require only VA CP surveillance to ensure employee safety and OSHA compliance, while other projects will require all disciplines to be involved.
4. Ensures submittals for contract construction or renovation work include the names, qualifications, and training dates for the contractors' CPs designated to administer the site-specific safety program, as well as the CPs for other activities as required by OSHA regulation (such as scaffolds, cranes, excavations, etc).
5. Conducts Infection Control Risk Assessments (ICRA). Using the current American Institute of Architects (AIA) Guidelines, the staff must conduct and document ICRA for all construction projects during the design or planning stage of the work. ICRAs must be documented in writing and focus on eliminating, or minimizing, the risk of infection during construction and renovation activities. The complexity of the ICRA report is determined by the complexity of the threats posed by the construction project. Assigned VA staff, including resident engineers or project managers for major construction, must maintain compliance during the construction phase of the work.

6. Identifies Interim Life Safety Measures (ILSMs). Facility safety and engineering staff must ensure that ILSMs are implemented on all construction work in accordance with The Joint Commission Environment of Care standards. ILSMs are required when construction activities pose significant temporary Life Safety Code deficiencies or hazards. The VA Pittsburgh Healthcare System has a local policy addressing ILSMs in accordance with The Joint Commission requirements. Implementing ILSMs is the responsibility of the local medical facility and construction contractors in accordance with VA Master Specification 01010, General Requirements.
7. Participates in all phases of construction work from planning through completion. This includes review and approval the construction plans, contract specifications, and contract submittals related to construction safety and health and any other documents that may assist in the implementation of an effective construction safety program. The Construction Safety Committee must be involved early in the process and continue oversight on a regular basis to avoid costly and disruptive delays.
8. Ensures the construction safety program includes periodic construction site hazard surveillance activities with appropriate membership, scope, and frequency for each project as determined by the CP, the ILSMs and ICRA reports. Hazard surveillance activities must be documented as to date, time, membership of the inspection team, deficiencies, type of corrective action, and time and date of correction. Ensures corrective actions are tracked to completion.
9. Implements procedures to ensure general contractors exercise their responsibility for ensuring subcontractors comply with this safety and health policy, and all other related contract requirements.
10. Ensures all contractors entering VA property comply with the security management program. As a minimum, contractors must notify and obtain permission of the VA Police, be identified by project and employer, and be restricted from unauthorized access.
11. Requires the contractors' CPs to implement and maintain effective safety programs that identify and control hazards that may cause injury or illness to VA patients, staff, visitors, and contractor employees.
12. Evaluates the effectiveness of the construction safety program in an annual report to the facility safety and/or environment of care committee, or equivalent committee.

M. Police and Security:

1. Insures all contractors entering VAMC property comply with the security management program. At a minimum, contractors must notify and obtain permission of the VAMC Police, be identified by project and employer, and restricted from unauthorized access.
2. Conducts periodic surveillance of site security and the integrity of barriers for trenches and other hazards.

N. Environmental Management Service (EMS)

1. The EMS Environmental Sanitation section provides housekeeping services to all areas of the facility while cleaning to prevent the spread of infection. They collect, remove and properly dispose of trash and infectious waste.
2. Participate in post-construction survey along with COR, project manager, safety/infection control staff and others to identify cleaning needs.
3. Ensure that proper cleaning of a post-construction area is performed in a proper timely manner.

O. The contractor is responsible for:

1. The contractor, including all subcontractors, is directly responsible for the health and safety of their employees and the protection of the work environment. All contractor and subcontractor personnel are responsible for compliance with applicable local, state, federal and VA safety and health regulations to include OSHA and EPA regulations.
2. All contractor and subcontractor personnel must participate in a pre-construction process education for Infection Control that includes:
  - a. Basic Infection Control principles related to construction that must be in place to protect our patients.
  - b. Risk to patients and possible consequences related to construction activities for patients.
  - c. The importance of containment of construction areas including maintaining negative air pressure if required and proper containment of sites.
  - d. Tuberculosis transmission and prevention.
3. Acceptable education sources include:

- a. VAPHS Construction Safety DVD.
  - b. ECRI Institute Risk Assessment (ICRA) for Healthcare Construction Certification.
  - c. Pittsburgh Carpenters Union 8-Hour ICRA 24 Training: Best Practices in Healthcare Construction.
  - d. Other programs attended to be reviewed by Infection Prevention upon request.
4. Providing documentation clearly showing the experience and training of the contractor's supervisory personnel, and indicating they are qualified as a competent person to properly supervise and maintain job site safety.
5. Conducting daily/weekly site safety inspections and maintaining documentation of such inspections and actions taken to abate deficiencies and unsafe conditions as required by the contract or at the request of the CO. (Note: The CO shall provide the contractor the appropriate inspection form as developed by the VA Pittsburgh Healthcare System.)
6. The contractor is responsible for obtaining Burn Permits as needed. The burn permits are to be issued on a day by day basis. They can be obtained from the COR.
7. The contractor shall submit a Waste Management Plan. This shall be submitted to the Medical Center prior to any waste removal. The plan shall contain the following:
  - a. Analysis
  - b. Proposed Alternatives to Land Filling
  - c. Methods of Handling Materials to be Recycled
  - d. Procedures
  - e. Landfill Options to include the names of the landfills
  - f. Transportation to include a description of means whether site-separated or self-hauled
  - g. Waste Management Plan Implementation, which includes a Waste Management Progress Report including material of land

filled from project, identity of landfill, total amount of tipping fees paid at landfill and total disposal costs

## V. REFERENCES

VHA Emerging Pathogens Guidebook, 1998, Center for Engineering and Occupational Safety and Health available electronically at: <http://vawww.ceosh.med.va.gov>

National Fire Protection Association (NFPA) Standards

Note: Current NFPA Standards are available at facility and/or VISN Safety and Engineering and/or Facilities Management Offices.

APIC Infection Control Tool Kit Series: Construction and Renovation, available from the Association of Professional Infection Control Practitioners and Epidemiologists (APIC).

Guidelines for Design and Construction of Hospital and Health Care Facilities, American Institute of Architects, Washington DC

Guidelines on Assessment and Remediation of Fungi in Indoor Environments, New York City Department of Health, Bureau of Environmental and Occupational Disease Epidemiology, at: [http://www.lchd.org/envirohealth/ag/pdfs/NYC DOH Guidelines.pdf](http://www.lchd.org/envirohealth/ag/pdfs/NYC%20DOH%20Guidelines.pdf)

Infection Control during Construction. A Guide to Prevention and The Joint Commission Compliance, Wayne Hansen, Editor, Opus Communications

OSHA Regulations for Construction Safety, 29 CFR 1926, available at: <http://www.osha.gov>

Current Standards of The Joint Commission.

VHA Directive 7701, Occupational Safety and Health

VHA Handbook 7701.1, Occupational Safety and Health Program Procedures

VA Directive 7700, Occupational Safety and Health

Construction Safety Council, at: <http://www.buildsafe.org>

VHA Directive 2011-036, Safety and Health during Construction Activities

VI. RESCISSION

Memorandum EC-051, dated December 20, 2005  
Memorandum EC-043 dated October 15, 2009.  
Memorandum FMS-003 dated March 14, 2011.

VII. CONCURRENCES

001, 11, 002, 00B, 05, 11D, All Service Lines VPs, AFGE Local 2028 and AFGE Local 3344

VIII. EXPIRATION

This memorandum automatically expires on February 21, 2016.

*//Signed//*

TERRY GERIGK WOLF, FACHE  
Director and CEO

Attachments:

- A. Pre-Construction Meeting Checklist
- B. Contract Worker's Safety Information
- C. Interim Life Safety Measures (ILSM)
- D. Infection Control and Safety/Health Guidelines for Construction and Removal
- E. Preconstruction Risk Assessment for Construction Compliance



### Pre-Construction Meeting Checklist

#### Items of Discussion:

1. Which items were accepted? Verify that there is an agreement between the contractor and the VA regarding which of the alternatives were accepted.
2. Labor Disputes (FAR 52.222-1).
3. Monthly Progress Payments (FAR 52.232-5).
4. Differing Site Conditions (FAR 52.236-2). All smoke and/or dust barriers will be in place and approved by infection control and safety prior to beginning any demolition or construction work.
5. Completion of Infection Control Risk Assessment (ICRA) Matrix of Precautions for Construction.
6. Superintendence by the Contractor (FAR 52.236-6). Must have full authority to act for the contractor.
7. IC Permit Obtained.
8. Cleaning Up (FAR 52.236-12).
9. Accident Prevention (FAR 52.236-13).
10. Specifications and Drawings for Construction (FAR 52.236-21).
  - a. Specifications govern over drawings.
  - b. Work done without approved submittals shall be at contractor's risk.
11. Changes (APR 19840). No oral order shall be considered as a change.
12. Inspection of Construction (FAR 52.246-12).
13. Specifications and Drawings for Construction (VAAR 852.236-71). Drawings are not to be scaled.
14. Daily Report of Workers and Materials (VAAR 852.236-80). Weekly pay statement. Documentation required for apprentices.
15. Schedule of Work Progress (VAAR 852.236-84).
16. Workman's Compensation (VAAR 852.236-86).
17. Parking Regulations.
18. Hauling Demolition Material. Loads must be covered. Trucks must be equipped with a tailgate.
19. Receiving of Contractor Shipments by Government Employees.
20. Asbestos removal.

21. Use of Government Ladders. Under no condition is the contractor authorized to use government ladders.
22. Smoking. No smoking in any building on station. Mechanical rooms and contractor occupied areas are no exception.
23. Material Safety Data Sheets. Contractor must provide MSDSs for all applicable materials that are brought onto the job site.
24. Safety. Safety of the contractor's personnel is the contractor's responsibility. VA will not intervene except when the safety of VA personnel or property is at risk.
25. Fire stopping shall be provided for all penetrations in vertical and horizontal smoke partitions.
26. Hot Work Permits are required for all hot work.
27. Fire Safety during Construction.
  - a. The contractor shall manage the work and schedule material arrival in a manner to result in a minimum of combustible material stored in the building at any one time.
  - b. Under no condition will fire exits or other means of egress be blocked or partially blocked.
  - c. Housekeeping/cleanup requirements shall be rigorously adhered to. All construction debris shall be removed from the building prior to the end of each shift.
  - d. Smoking rules shall be strictly observed.
  - e. The fire alarm system may not be disarmed or disabled in any way unless an equally effective alternative fire alarm system is provided.
  - f. All construction partitions shall be non-combustible and smoke tight. Fire and smoke barriers will be constructed prior to any penetrations, and then sealed to meet appropriate codes.
28. Lock Out/Tag Out Energy Control Program shall be observed by all contractor personnel. Contractor is to submit a copy of their policy for approval.
29. Working in Confined Space shall be observed by all contractor personnel. Contractor is to submit a copy of their policy for approval. Contractor must obtain a permit prior to conducting any confined space work.

## Contract Worker's Safety Information

### Contract Reference

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

In the event of a fire (Code Orange), remember RACE. Rescue persons in immediate danger, pull the fire Alarm and Contain the fire by closing any doors. If it is safe to do so, and you have been trained, try to Extinguish the fire with a portable fire extinguisher. If you do not hear the alarm sound, call ext. 911 to report the location. Know the location of the fire alarm and extinguisher in your work area.

Keep all dust and odors within the construction or maintenance site. All Material Safety Data Sheets (MSDS) for materials must be posted. Provide MSDS to the Contracting Officer's Technical Representative (COR).

Asbestos. Assume that any sprayed-on fireproofing and thermal insulation contains asbestos. Ceiling tiles provide the barrier between the asbestos in the interstitial and the occupied areas below. Interior walls provide a similar barrier to asbestos fireproofing on vertical columns.

Ceiling tiles cannot be moved or displaced without proper containment and personal protective equipment. Wall penetrations cannot be made without proper containment and personal protective equipment. Immediately report all disturbances of asbestos-containing materials to your supervisor and the COR.

Hazardous Waste. The VA Pittsburgh Healthcare System indicates waste that is hazardous with different colored bags:

- RED for infectious or biohazardous waste.
- YELLOW for chemo waste.
- CLEAR & BLACK for general waste.
- Signs on containers also indicate whether the contents are biohazardous, radioactive or cytotoxic.
- DO NOT TOUCH THE CONTENTS OF ANY OF THESE CONTAINERS.

Hazardous Spills. Locate the MSDS and contact the Facility Management Service:

a. Normal Administrative hours (7:00 am – 3:30 pm)

1. If the spill is a small quantity, can be cleaned up by the employee who works in the area where the spill occurred, and safety is not jeopardized, the service employee can clean up the spill.

2. If employee's health and safety is jeopardized, the spill will be cleaned up by the Spill Team.
3. Contact the Safety Office/Spill Coordinator at 412- 360-3705, (Cell# 412-310-2824) or 606138. The Safety Office may also be contacted at Highland Drive, 544899 (Pager "12" 4190) for incidents at that facility.

b. After Administrative Hours (3:30 pm to 7:00 am)

1. If the Industrial Hygienist/Spill Coordinator is unavailable or for days and times (Monday-Friday) 4:00 pm to 7:30 am) and on weekends, notify the facilities operator by dialing 911. A Chemical Spill/Release Response Chain Call system has been established.

Utility Shutdown. You must notify your supervisor and COTR for approval: (7 day advance approval is required with appropriate time for hospital notifications)

- Prior to lock out/tag out of any utility system.
- If a utility failure occurs.
- Prior to restoring a system.

Smoking. Smoking is not allowed in any building and only in designated outdoor areas.

Patient Care Areas. Before entering a patient care room, receive permission and instructions from the nurse in charge. Respect the privacy of all patients.

Remember, the patients at VAPHS are veterans who have served to protect our country.

Your Project Manager (COR) is \_\_\_\_\_, ext.

The Safety Officer is \_\_\_\_\_, cell 412-954-4899

Police and Security can be reached at extension 412-360-6911.

Employee Name/ Signature \_\_\_\_\_ Date: \_\_\_\_\_

Contractor Pre-Construction Checklist

Date: \_\_\_\_\_  
(Enter Facility Name)  
Project No: \_\_\_\_\_ Contract No: \_\_\_\_\_  
Project Name: \_\_\_\_\_

Smoking:  
Non-smoking facility Smoking only permitted in designated areas.

Welding/Soldering/Sprinkler Work:  
Any welding/soldering will require a permit. Fire alarm & fire pump shall be put in BI-Pass during sprinkler work.

Transmittal Correspondence:  
All correspondence shall have project no., project name and contract no., sequentially numbered and dated.

Submittals:  
The VA will retain two (2) submittals.  
Contracting Officer shall receive Letter of Transmittal.  
All submittals shall be in original form as required by the contract.  
Submittals shall be sequentially numbered. If return of submittal is required, the submittal shall be labeled with an alpha character determined by the number of submissions, i.e., A, B, C, etc.  
All (MSDS) Material Safety Data Sheet information.

Parking:  
Project Manager shall issue temporary parking permits required for all vehicles. Park only in designated areas.

ID Badges:  
Temporary personnel identification badges shall be required for the duration of the contract. Project Manager shall issue forms. Lost badges will be replaced at contractor's expense. Badges must be visible at all times for security measures.

Daily Logs:  
Daily logs shall be complete and submitted weekly. One (1) original is required.

(RFI) Request For Information:  
Shall be submitted in sequential order.

VA Primary Contact:

Mr./Ms. \_\_\_\_\_ Phone: \_\_\_\_\_

Fax: \_\_\_\_\_ Location: \_\_\_\_\_

VA Contracting Officer Contact:

Mr./Ms. \_\_\_\_\_ Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Location: \_\_\_\_\_

Hazardous Materials on Site:

(Complete as necessary).

Submit Within First 10 Days:

Progress Chart (see example).

Submittals (copy of transmittal sheet to Contracting Officer).

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

List of Subcontractors.

Material Safety Data Sheets (if applicable).

Copy of Contractor Certification or Permit (if applicable).

Forms: (VA Common Electronic Form Index)

After Hour Request (Security).

Confined Space Entry. (if applicable)

Construction Worker Introduction.

Contractor Cutting, Welding and Soldering Permit.

Contractor ID Badge Request Form.

FMS Contractor Key Agreement Letter

Contractor Parking Permit Request.

Daily Log.

Life Safety Measures.

For Payment: (Original and 2 copies)

Progress Payment Sheet (use enclosed format).

Payrolls.

Daily Logs (submitted weekly to Project Manager).

Updated Progress Chart (if applicable).

Cost Breakdown and Contract Progress Report (Form 08-6001a, front and back).

Final Inspection:

Notify Project Manager 15 days prior to date of contract completion date.

Submit redline as built drawing set.

Clean area completely.

### Contractor Life Safety Measures

FIRE:        Locate Pull Stations.  
              Phone ext. 911 to report.  
              Know evacuation routes & fire codes in adjacent areas.

FUMES:     Have MSDS sheets on site.  
              Phone Industrial Hygienist, 412-360-3705.

LEAKS:     Contact Project Manager.  
              Phone ext. 816138 to report.

DUST:      Non-combustible barriers around project sealed.  
              Negative air to outside.

OSHA:      Comply with all guidelines.

HINDSIGHT:    Impacts to facility.  
                    Employee relocations.  
                    Shutdowns.

PREVENTIVE TRANSFERENCE OF BLOOD PATHOGENS:  
              Wash hands, clean shoes prior to leaving work area.  
              Clean work area daily.

No exposures outside dust barriers.

After Working Hours Activity Security Form

Date: \_\_\_\_\_

Hours: \_\_\_\_\_ - \_\_\_\_\_

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

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Located in: Bldg # \_\_\_\_\_; Floor # \_\_\_\_\_; Wing \_\_\_\_\_; Room # \_\_\_\_\_

The following persons will be involved:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

Superintendent in Charge: \_\_\_\_\_

Phone: \_\_\_\_\_

Pager: \_\_\_\_\_

Cell Phone: \_\_\_\_\_

You are directed to check in and out in Room-xxxx, with the medical center Police, who will assist as necessary.

\_\_\_\_\_, Project Manager  
Cell phone: \_\_\_\_\_

APPROVED: \_\_\_\_\_, Police/Security, 412-360-6911

Special Instructions: Open locked doors as required.



Contractor ID Badge Request Form

(Please print all information.)

Date: \_\_\_\_\_

Name of Contract: \_\_\_\_\_

Contractor: \_\_\_\_\_

PLEASE PROVIDE THE FOLLOWING INFORMATION FOR ISSUANCE OF  
CONTRACTOR ID BADGE: (Must have a valid photo ID/State Driver's License).

A. NAME: \_\_\_\_\_

SOCIAL SECURITY NUMBER: \_\_\_\_\_

B. NAME OF COMPANY: \_\_\_\_\_

C. PHONE NUMBER(S): \_\_\_\_\_

D. EXPIRATION DATE OF CONTRACT (provided by VA) \_\_\_\_\_

ID BADGES ARE ISSUED MONDAY THRU FRIDAY (8 A.M. TO 4 P.M.)

Complete this form and take to the VA Police Office, (insert VA Police location and  
phone extension).

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

If your issued ID Badge is lost, you will be charged \$25.00 for a replacement.

Approving Official:

Print Name: \_\_\_\_\_

Signature: \_\_\_\_\_

## FMS CONTRACTOR KEY AGREEMENT LETTER

NAME	COMPANY/COR	KEYS ISSUED	QTY
------	-------------	-------------	-----

---

I, the undersigned, acknowledge receipt of the keys designated above, and the terms below:

- (1) I agree not to loan, transfer or give possession of the keys to Any employee or subcontractor, or misuse, modify or alter the keys in any way; \_\_\_\_\_ init
- (2) I agree not to cause, allow or contribute to the making of any unauthorized copies of the above keys; \_\_\_\_\_ init
- (3) I agree not to allow any engineering mechanical or electrical doors to be propped open. \_\_\_\_\_ init
- (4) I agree not to store any materials in the engineering mechanical or electrical rooms. \_\_\_\_\_ init
- (5) I agree this key will remain in the control of the Contractor Superintendent/undersigned at all times; \_\_\_\_\_ init
- (6) I agree to immediately report a lost or missing key to the Contracting Officers Representative (COR) for the project and further understand I can be help financially accountable for the loss, and any expenses to rekey affected areas due to the loss. \_\_\_\_\_ init

I understand if the VA finds the contractor non-compliant with these requirements, the VA will have the key removed from the contractor and they will be required to sign the key out daily through the Contracting Officers Representative (COR) for the remainder of the project.

Printed Name \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

Request for Contractor Parking Permit Form

Submit the following information:

1. Name of Operator: (Print) \_\_\_\_\_
2. Name of Company: \_\_\_\_\_
3. Company Phone Number: (\_\_\_\_\_) \_\_\_\_\_
4. License Number of Vehicle: \_\_\_\_\_
5. Make of Vehicle: \_\_\_\_\_
6. Model and Year: \_\_\_\_\_

Signature of Requestor: \_\_\_\_\_

Note: This permit is only valid for the vehicle listed above. Parking is only permitted (insert contractor parking location).

Place permit on the driver side, lower left corner of windshield. If permit expires, it is your responsibility to renew this permit. It is recommended that you renew your permit two (2) weeks ahead of expiration date.

VA Use Only:

Date of Issue: \_\_\_\_\_

Date of Expiration: \_\_\_\_\_

Permit Number: \_\_\_\_\_

VA PITTSBURGH HEALTHCARE SYSTEM  
INTERIM LIFE SAFETY MEASURES

1. Life Safety deficiencies are identified through a program of periodic inspections, including:
  - a. Environment of care rounds and periodic focus inspections to identify deficiencies with building features such as door hardware (closers, latching); exit signs and proper operation of linen and trash chutes.
  - b. Periodic unannounced inspections of construction and service areas to verify sealing of penetrations through barrier walls.
  - c. Weekly safety inspections are conducted by the Contracting Officer Representative (COR) in all construction areas.
  - d. Unannounced inspections of construction areas are conducted by VAPHS Safety Specialists.
  - e. A full facility inspection, including complete inspection of smoke barrier walls – outside wall to outside wall and slab to slab, is conducted by a fire protection engineering firm at least once every three years.
2. Reports of life safety deficiencies not related to construction projects are reviewed by the Safety Manager or designated Safety Specialist (fire protection).
  - a. Insignificant deficiencies are items that can be resolved within 45 days of date of the inspection report, and do not involve items listed as “significant deficiencies” on the ILSM determination matrix, Column A. Neither an ILSM evaluation nor a plan for improvement is required for insignificant deficiencies.
  - b. If an insignificant deficiency cannot be corrected within 45 days of the date of the inspection report, OR IF THE DEFICIENCY IS ONE THAT IS IDENTIFIED AS A SIGNIFICANT DEFICIENCY on the ILSM determination matrix, Column A, an ILSM evaluation will be conducted and appropriate interim life safety measures will be required and implemented.
3. ILSM evaluations will be conducted for all construction projects.
4. The decision of which Interim Life Safety Measures are appropriate for implementation will be made by following The Joint Commission guidance on this topic and by using the ILSM decision matrix. This matrix lists Interim Life Safety Measures that are recommended – but not mandatory - for specific types of deficiencies.

An Interim Life Safety Measures form will be completed by the Specialist or Manager and maintained in the Safety Department Share Drive. Documentation that supports implementation of the required interim life safety measures will also be maintained in that file.

NOTE: For purposes of ILSM evaluations, the terms multiple and extended periods are not specific. Need for ILSMs is evaluated on a case by case basis.

5. Interim Life Safety Measures that may be implemented include:
  - a. When exits are impacted by construction, alternate exit routes will be checked on a frequent basis. If the closure leaves two exit routes available, those routes will be inspected by the safety office staff. Inspections will be conducted, to the extent possible on Monday - Friday (excluding holidays). In rare circumstances, conditions may require that alternate exit routes be inspected 7 days a week. For example, if closure of an exit leaves only one exit route open and the affected area is occupied seven days a week. The alternate exit may need to be inspected seven days a week.
  - b. When a complete fire alarm system is taken out of service for a zone, or if all manual pull stations in a zone occupied by health care system is taken out of service, interim measures will be implemented. If the outage is extended, the interim measure will consist of a fire watch and if the zone is occupied staff will be trained on alternate methods to report a fire. Based on the expected duration, a temporary fire alarm system may need to be provided. Details of the temporary system, including devices to be installed and device placement, will be approved by the Safety Manager (or designee) before installation. Temporary systems shall be tested not less than monthly.
  - c. When a sprinkler system for a zone is taken out of service a fire watch will be implemented. If the outage occurs in a construction area, contractors are required to bring portable fire extinguishers into the area. Presence and condition of these extinguishers shall be checked periodically by safety office staff during unannounced inspections of construction areas. If the outage occurs in a hazardous area such as bulk storage or hazardous chemical storage and is expected to extend outside of normal business hours on any given day, the Safety Office will provide additional temporary fire extinguishers for the area.
  - d. When construction is performed in buildings that are jointly occupied by VA staff, patients and visitors, temporary construction partitions shall be constructed to separate the construction area from all other areas.

- 1) Construction partitions shall be smoke tight and shall be constructed of noncombustible or limited combustible material that will not contribute to the development or spread of fire. These smoke tight noncombustible partitions shall extend above ceiling to assure that smoke will not migrate above ceiling from the construction area to other areas of the building. Integrity of the partitions will be inspected by the project COTR during routine construction area inspections and by the safety office during unannounced inspections of construction areas.
- 2) Partitions constructed of fire retardant plastic may be used in limited short term situations, subject to the following limitations:
  - a) Use of the fire retardant plastic barrier shall be approved by the VAPHS Safety Manager (or Acting Safety Manager).
  - b) Time limit for use of the fire retardant plastic barrier is 48 hour maximum.
  - c) Fire retardant plastic with non-combustible or limited combustible bracing shall be used to construct the barrier. Fire retardant plastic shall meet the requirements of ASTM E-84 for flame spread and smoke development. Documentation showing the characteristics of the material shall be provided to the VAPHS Safety Manager for approval before the barrier is constructed.
  - d) No hot work is permitted within 25 feet of the barrier (inside or outside the barrier)
- e. When sprinkler systems are out of service, fire watches will be conducted to increase hazard surveillance and minimize risk that fire will occur or spread before intervention can occur. Increased hazard surveillance will also occur when areas are under construction. The COTR for each project will conduct inspections to insure the hazards are not present – or that they are quickly corrected if any should be noted. Examples of hazards that are identified and acted on during hazard surveillance include accumulations of debris, or improper storage – materials not stored in established storage rooms, mixing of flammable and combustible materials, or storing of flammables outside of approved storage cabinets/rooms. Safety Specialists from the Safety Office will also conduct periodic unannounced inspections of construction and adjacent areas to assure that hazards are identified and abated.
- f. When a sprinkler system for a zone is taken out of service a fire watch will be implemented. If an extended sprinkler outage occurs in an area occupied by VAPHS staff, a designated Safety Specialist will visit the area and provide a refresher on use of fire extinguishers located in the area

- g. When construction projects or identified life safety deficiencies in a building impact any of the following situations in patient care buildings, additional fire drills may be conducted in the building. Drills will be conducted at the rate of two per building per shift per quarter in the occupied building during construction. If significant life safety deficiencies not associated with construction are identified and cannot be corrected within 30 days, additional drills will be implemented. Additional drills will continue until the construction is completed or the deficiency has been corrected.
- Sprinkler system out of service for extended period
  - Fire alarm system out of service for extended period
  - Improperly protected vertical openings
  - Lack of required smoke barrier
  - Large or multiple penetrations in existing smoke barrier
  - Exits blocked
  - Design of area results in less than two remote exits
  - Addition to existing building without proper fire separation between existing and addition
  - Corridor walls to not terminate at smoke tight membrane
  - Multiple door hardware defects within a single smoke zone
- h. Additional training shall be provided to staff when construction or existing life safety deficiencies occur in any of the following “significant deficiency” categories. Training shall include a review of the life safety condition that exists, additional actions being taken by the organization to insure safety of occupants and expectations for staff action to insure safety of occupants. For example if exits are closed because of construction, training will include a discussion of alternate exits. Training may be provided as part of additional fire drills (if required) or as part of separate informal training sessions in the affected areas. Circumstances where additional training will be provided include:
- Blocked exits or lack of two remote exits
  - Sprinkler system out of service for extended periods
  - Fire alarm system out of service for extended periods
  - Large or multiple penetrations in smoke barriers, OR lack of a required smoke barrier
6. The Safety Manager will present a monthly report to the Safety/EOC Committee of all interim life safety measures that were implemented in the current month.

**GUIDANCE FOR DETERMINING APPROPRIATE INTERIM LIFE SAFETY MEASURES**

<b>COLUMN A</b>  Significant Life Safety Code Deficiencies in Existing Buildings or Conditions that Occur As a Result of Construction.	Additional training on extinguishers	Ensuring egress (inspections of routes)	Temporary fire alarm with monthly test	Emergency Forces Access	Emergency Forces Notification	Ensuring Operational life safety systems	Temporary construction barriers	Additional Fire fighting equipment	Prohibiting Smoking	Controlling combustible loading	Conducting 2 fire drills per shift in all areas	Increased hazard surveillance	Compartmentation training for personnel	Conducting organization training on life safety
Nonconforming building construction				X				X	X	X	X			X
Sprinkler system out of service for extended period	X			X	X	X		X	X	X	X	X		X
Fire alarm system out of service for extended period			X		X	X			X		X			X
Improperly protected vertical openings									X	X	X			
Lack of code complying smoke barrier		X		X					X		X		X	
Large or multiple penetrations in fire/smoke barriers		X							X		X		X	
Exit blocked		X							X	X			X	
Lack of two remote exits		X							X	X			X	
Fire exit stairs lack proper exit discharge		X				X			X		X		X	X
Major renovation of an occupied bldg.		X		X								X		



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Improperly protected hazardous area									X			X		
Addition to existing building without fire separation				X	X	X	X		X	X	X			
Corridor walls not to smoke tight membrane									X			X		
Multiple door hardware defects in smoke zone									X			X		

## INFECTION CONTROL AND SAFETY/HEALTH GUIDELINES FOR CONSTRUCTION AND RENOVATION

### I. PURPOSE

The purpose of this attachment is to prevent the acquisition of hospital-acquired infections in patients and to decrease the risk of exposure of employees, visitors, and contractors, to potential infections, safety and other health hazards during renovation or construction activities at the VA Pittsburgh Healthcare System. In addition, to establish procedures and programs for proper management and remediation of any mold found inside the VAPHS.

### II. RESPONSIBILITIES

A. Medical Center Director will assure that all project coordinators, engineers and Vice President Facilities Management (VP FMS) apprises the Infection Control nurse and the Safety Office of plans for all projects involving construction and/or renovation of clinical and non-clinical areas in the medical center.

B. Supervisors are responsible to inform Infection Control and/or the Safety Office of employee concerns for potential mold growth.

C. Infection Control Nurse, the Safety Office, and/or Project Engineering is responsible for:

1. Upon request, conduct an assessment for the existence of mold, or moldy building materials.
2. Specify appropriate removal procedures and provide infection prevention and control recommendations for mold/moldy building materials during construction and renovation projects. Guidelines established by CDC, EPA, and OSHA will be used.
3. Notify Facilities Management and Employee Health of areas of mold concerns.
4. Notify employees in the area of the status of mold concerns
5. If applicable, report to the Safety Committee, the status of mold issues and the impact of employees.
6. Complete Appendix B, Mold Remediation Risk Assessment to determine proper remediation techniques and precautions to be applied.

7. The Project Engineer will issue the Infection Control Construction Permit.

8. Monitor and response to safety and hazard related issues during construction and renovation projects.

D. Facilities Management (Environmental Management and Maintenance and Repair) employees are responsible to:

1. Report all suspect mold to Safety and/or Infection Control. 2. Follow approval mold removal procedures as recommended by Safety and/or Infection Control.

2. Follow approved mold removal procedures as recommend by Safety and /or Infection Control Nurse.

3. Use the attached Infection Control Construction Permit (Attachment D, page 12 of 18) for any Mold Remediation Activity that qualify as Type C or Type D, and for Type B activities in the highest risk areas, as designated on the Risk Assessment, Appendix B.

E. Contractors shall comply with VHA Directive 2011-036 Safety and Health during Construction. Construction workers at VAPHS were determined to be at risk for the transmission of Tb based on the Pre-Construction Risk Assessment and the following must occur:

1. The contractor must provide written certification to the COR that all contract employees assigned to the work site have had pre-placement tuberculin screening within 90 days prior to assignment to the worksite and found to have negative Tb screening reactions.

2. The contractor will be required to show documentation to the COR for additional workers assigned after the 90 day requirement before they will be allowed to work on the work site.

3. This testing may be two-step skin testing or a Food and Drug Administration (FDA) approved blood test such as the Quantiferon Gold Test.

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

5. If the worker is found without evidence of active pulmonary Tb, a statement documenting examination by a physician must be on file with

the employer (construction contractor) noting that the employee with a positive tuberculin screen test is without evidence of active Tb.

III. PROCEDURES:

A. Planning Phase

1. Infection Control and the Safety Office will participate in the project pre-construction meeting.
2. Infection Control and Safety Officer will be involved in the planning phases for all renovation and new construction projects and have input specific to the following major components (design):
  - a. Number and placement of isolation rooms
  - b. Air handling systems; use of adjunctive measures such as ultraviolet germicidal irradiation (UVGI) and appropriate filtration systems
  - c. Number and placement of hand washing facilities
  - d. Staff and patient traffic patterns for the duration of the project.
  - e. Relocation decisions regarding patient care areas, storage areas, etc.
  - f. Water supply and plumbing
  - g. Number and placement of eye-wash, shower, hazardous chemical or compressed gas facilities.
  - h. Construction waste containment, transport and disposal
  - i. Selection and installation of medical equipment as it relates to infection control.
  - j. Selection of finishes and surfaces that can be effectively cleaned.
3. Renovation projects in-house may also be done by our employees. Mold Removal Guidelines (Attachment D, page 16 of 18) will be used for these projects. Portions may also be used for larger projects requiring outside contractors.

4. The Project Engineer, with the assistance of the Infection Control Nurse will complete the Risk Assessment (Attachment D, page 8 of 18) and Construction Permit (Attachment D, page 12 of 18). The Permit is then signed by the Project Engineer, Infection Control Nurse, the contractor, and/or the VA MIT/M&R.

B. Operational Phase

1. Medical Waste

a. Environmental Management Service staff shall remove any medical waste, including sharps containers, from areas to be renovated or constructed BEFORE the start of the project.

b. Infection Control shall be notified immediately if unexpected medical waste is encountered.

c. Environmental Management Services will do appropriate cleaning of all areas prior to the start of the project and at the completion of the project.

2. Barrier Walls: Construction or renovation sites must be separated from patient-care areas and critical areas such as SPD and Pharmacy by barriers that keep the dirt and dust inside the worksite.

a. The integrity of the barrier walls must assure a complete seal of the construction area from adjacent areas.

b. Rigid construction or fire-rated plastic sheeting (4 or 6 mil thickness) are used, depending on the location of the project, adjacent uses, and duration of the project.

c. Walls will be dustproof with seals maintained at the full perimeter of the walls, which allow for minimization of dust collection and spread.

3. Environmental Control

a. Negative air pressure and HEPA (High Efficiency Particulate Air) filter vacuum system rated at 95% capture of 0.3 microns will be implemented as needed within the construction zone, at the discretion of the Engineering Department and the Construction site manager.

b. Demolition debris will be disposed of into non-infectious waste trash bins and removed from the construction area daily, using specified traffic patterns. All waste bins will be tightly covered during transport outside of the construction site.

c. "Sticky" or walk-off mats shall be utilized immediately outside the construction zone and elevators to remove dust and soil from shoes, cart wheels, etc. as personnel exit the area. The "sticky" mat must be large enough to cover the entire exit and is changed whenever necessary, but at a minimum daily.

d. Exterior windowsills must be assured to minimize infiltration of outside excavation debris; Windows will remain closed as much as feasible during the construction/renovation process.

e. Control, collection and disposal must be provided for any drain liquid or sludge encountered when Facility employees or contractors are demolishing plumbing.

4. Traffic Control

a. Designated entry and exit procedures will be defined (in conjunction with any necessary Interim Life Safety Measures) for each construction project where applicable. To the extent feasible, the entry and exit procedures will be annotated on the contract drawings and explained during pre-bid and pre-construction meetings.

b. All egress pathways will be free of debris.

c. Unauthorized personnel will not be allowed to enter the construction zone.

d. Only designated elevators will be used for construction activities during scheduled times.

e. Construction areas will be fitted with self closing lockable doors and will remain locked at all times.

5. Cleaning

a. The construction zone and adjacent entry areas shall be maintained in a clean and sanitary manner by the

contractors and will be swept and wet mopped at the end of each day or more frequently as required.

b. Environmental Management Services will be responsible for the routine cleaning of adjacent areas including stairwells and for the terminal cleaning of the construction zone prior to the opening of the newly renovated or constructed area. Specific responsibility will be defined in the construction contracts.

6. Personnel Requirements

a. Clothing shall be free of loose soil and debris upon exiting the construction zone.

b. Personnel entering sterile/invasive procedure areas will be provided with a disposable jump suit, head covering and shoe coverings, which must be removed prior to exiting the work area.

1. Tools and equipment must be damp-wiped prior to entry and exit from sterile and invasive procedure areas.

2. Tools and equipment soiled with blood and body fluids will be cleaned with an approved germicide (e.g. Cavicide).

a. Facilities Management employees shall receive Infection Control and Safety and Health training as it relates to construction.

7. Environmental Monitoring - Infection Control, in conjunction with Facilities Management and Safety, will plan for environmental monitoring as appropriate for the project.

C. Completion Phase

1. The area will be thoroughly cleaned and disinfected by EMS before being placed into service.

2. The VA Plumbing shop will flush water supply lines before placing newly renovated or constructed areas into service. Infection Control, Safety Office and affected areas will be notified prior to the scheduled date for the flushing procedure.

3. Infection Control personnel shall certify that water supply lines are safe for use.

D. Compliance Monitoring

1. The Project Engineer or COR (Contracting Officer's Representative) will conduct weekly safety inspections.
2. Medical center staff (Project Engineer, Safety Manager, Industrial Hygiene, Infection Control) and the contractor will conduct compliance monitoring as necessary. The following parameters will be monitored:
  - a. Air quality
  - b. Integrity of barrier walls and floors
  - c. Infection Control
  - d. Noise
  - e. Traffic Control

VI. REFERENCES

Bartley, J. Construction and Renovation: APIC Text of Infection Control and Epidemiology, APIC, Inc. 2005

Guidelines for Environmental Infection Control in Healthcare Facilities - Recommendations of CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC), MMWR Vol. 43 (RR-13): 1-132

CAMH, CAMAC, CAMLTC, CAMBHC EC 3.2.1 2002 edition

OSHA Occupational Safety and Health standards 29 CFR 1910 and 1960  
[www.osha.gov/SLTC/indoorairquality/index.html](http://www.osha.gov/SLTC/indoorairquality/index.html)

Joint Commission Environment of Care Standards

Centers for Disease Control (CDC) information on "Molds in the Environment"  
[www.cdc.gov/nceh/airpollution/mold/moldfacts.htm](http://www.cdc.gov/nceh/airpollution/mold/moldfacts.htm)

State of the Science on Molds and Human Health – Stephen C. Redd, MD, Chief, Air Pollution and Respiratory Health Branch, National Center of Environmental Health, Centers for Disease Control & Prevention – US House of Representatives  
[www.cdc.gov/nceh/airpollution/images/moldsci.pdf](http://www.cdc.gov/nceh/airpollution/images/moldsci.pdf)

Mold Remediation in Schools and Commercial Buildings, EPA March 2001



**RISK ASSESSMENT**  
PLANNING STAGE HAZARD ANALYSIS WORKSHEET

Rate Potential for Compromise on Scale of 5-1

5 being the highest possibility of occurrence or the weakest resources

1 being the least likely to occur or the strongest resources

**List Type of Construction Activity:**

(New Construction/Renovation/Demolition)

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Potential Compromise to:	Potential for Compromise	List Patient Care Areas Impacted	List Non-Patient Care Areas Impacted	List Public Access Areas Impacted	List Control Activities Needed
Air Requirements		_____ _____ _____	_____ _____ _____	_____ _____ _____	1. ____ 2. ____ 3. ____
Infection Control		_____ _____ _____	_____ _____ _____	_____ _____ _____	1. ____ 2. ____ 3. ____
Utility Failure - (Check Effectuated Utility) <input type="checkbox"/> Communications/Telephone <input type="checkbox"/> Electrical <input type="checkbox"/> Generator <input type="checkbox"/> Temperature <input type="checkbox"/> HVAC <input type="checkbox"/> Medical/Natural Gas <input type="checkbox"/> Medical Vacuum <input type="checkbox"/> Sewer <input type="checkbox"/> Water <input type="checkbox"/> Other: _____		_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	1. ____ 2. ____ 3. ____ 4. ____ 5. ____ 6. ____ 7. ____ 8. ____ 9. ____
Usual Noise Levels		_____ _____ _____ _____	_____ _____ _____ _____	_____ _____ _____ _____	1. ____ 2. ____ 3. ____ 4. ____
Vibration Levels		_____ _____ _____ _____	_____ _____ _____ _____	_____ _____ _____ _____	1. ____ 2. ____ 3. ____ 4. ____
Emergency Procedures (Check Effectuated Procedure) <input type="checkbox"/> Fire Safety <input type="checkbox"/> Emergency (Disaster) Management <input type="checkbox"/> Security <input type="checkbox"/> Other: _____		_____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____	1. ____ 2. ____ 3. ____ 4. ____ 5. ____ 6. ____

## Infection Control Risk Assessment Matrix of Precautions for Construction & Renovation

**Step 1: Using the following table, *identify the type of Construction Project Activity (A-D)***

<b>Type A</b>	<p style="text-align: center;"><b>Inspection and Non-Invasive Activities</b></p> <p>Includes, but is not limited to:</p> <ul style="list-style-type: none"> <li>• Removal of ceiling tiles for visual inspection limited to 1 tile per 50 square feet.</li> <li>• Painting (but not sanding)</li> <li>• Wallcovering, electrical trim work, minor plumbing, and activities which do not generate dust or require cutting of walls or access to ceilings or other than for visual inspection.</li> </ul>
<b>Type B</b>	<p style="text-align: center;"><b>Small scale, short duration activities which create minimal dust</b></p> <p>Includes, but is not limited to:</p> <ul style="list-style-type: none"> <li>• Installation of telephone and computer cabling</li> <li>• Access to chase spaces</li> <li>• Cutting of walls or ceiling where dust migration can be controlled</li> </ul>
<b>Type C</b>	<p style="text-align: center;"><b>Work that generates a moderate to high level of dust or requires demolition or removal of any fixed building components or assemblies</b></p> <p>Includes, but is not limited to:</p> <ul style="list-style-type: none"> <li>• Sanding of walls for painting or wall covering</li> <li>• Removal of floor coverings, ceiling tiles and casework</li> <li>• New wall construction</li> <li>• Minor duct work or electrical work above ceilings</li> <li>• Major cabling activities</li> <li>• Any activity which cannot be completed within a single workshift</li> </ul>
<b>Type D</b>	<p style="text-align: center;"><b>Major demolition and construction projects</b></p> <p>Includes, but is not limited to:</p> <ul style="list-style-type: none"> <li>• Activities which require consecutive work shifts</li> <li>• Requires heavy demolition or removal of a complete cabling system</li> <li>• New construction</li> </ul>

Note: Reference: "[www.icanprevent.com](http://www.icanprevent.com)"

**Step 2: Using the following table, *identify the Patient Risk Groups that will be affected. If more than one risk group will be affected, select the higher risk group:***

<b>Low Risk</b>	<b>Medium Risk</b>	<b>High Risk</b>	<b>Highest Risk</b>
<ul style="list-style-type: none"> <li>• Office areas</li> </ul>	<ul style="list-style-type: none"> <li>• Cardiology</li> <li>• Echocardiography</li> <li>• Endoscopy</li> <li>• Nuclear Medicine</li> <li>• Physical Therapy</li> <li>• Radiology/MRI</li> <li>• Respiratory Therapy</li> </ul>	<ul style="list-style-type: none"> <li>• CCU</li> <li>• Emergency Room</li> <li>• Labor &amp; Delivery</li> <li>• Laboratories (specimen)</li> <li>• Newborn Nursery</li> <li>• Outpatient Surgery</li> <li>• Pediatrics</li> <li>• Pharmacy</li> <li>• Post-Anesthesia Care Unit</li> <li>• Surgical Units</li> </ul>	<ul style="list-style-type: none"> <li>• Any area caring for immunocompromised patients</li> <li>• Burn Unit</li> <li>• Cardiac Cath Lab</li> <li>• Central Sterile Supply</li> <li>• Intensive Care Units</li> <li>• Medical Unit</li> <li>• Negative pressure isolation rooms</li> <li>• Oncology</li> <li>• OR rooms including C-section rooms</li> </ul>

**Step 3:**

**Match the Patient Risk Group** (low, medium, high, highest) with the planned **Construction Project Type** (A, B, C, D) on the IC Matrix to find the **Class of Precautions** (I, II, III, IV) or level of infection control activities required. Classes of precautions are described in the table on the next page.

**IC Matrix: Class of Precautions for Construction Projects by Patient Risk**

Patient Risk Group	Type A	Type B	Type C	Type D
LOW Risk Group	I	II	II	III/IV
MEDIUM Risk Group	I	II	III	IV
HIGH Risk Group	I	II	III/IV	IV
HIGHEST Risk Group	II	III/IV	III/IV	IV

**Note:** Infection Control approval will be required when the Construction Activity and Risk Level indicates that **Class III** or **Class IV** control procedures are necessary.

Attachment D  
Memorandum EC-051  
February 21, 2013

<i>Infection Control Construction Permit</i>					
Location of Construction: Project Coordinator: Contractor Performing Work: Supervisor:				Permit No: Project Start Date: Estimated Duration: Permit Expiration Date: Telephone:	
YES	NO	CONSTRUCTION ACTIVITY	YES	NO	INFECTION CONTROL RISK GROUP
		TYPE A: Inspection, non-invasive activity.			GROUP 1: Low Risk
		TYPE B: Small scale, short duration, moderate to high levels.			GROUP 2: Medium Risk
		TYPE C: Activity generates moderate to high levels of dust, requires greater 1 work Shift for completion.			GROUP 3: Medium/High Risk
		TYPE D: Major duration & construction activities requiring consecutive work shifts.			GROUP 4: Highest Risk
Class I		1. Execute work by methods to minimize raising dust from construction operations. 2. Immediately replace any ceiling tile displaced for visual inspection.			
Class II		3. Minor demolition for remodeling. 4. Provides active means to prevent air-borne dust from dispensing into atmosphere. 5. Water mist work surfaces to control dust while cutting. 6. Seal unused doors with duct tape. 7. Block off and seal air vents. 8. Wipe surfaces with disinfectant.			
Class III		9. Contain construction waste before transport in tightly covered containers. 10. Wet mop and/or vacuum with HEPA filtered vacuum before leaving work area. 11. Place dust mat at entrance and exit of work area. 12. Remove or isolate HVAC system in areas where work is being performed.			
Class IV		13. Vacuum work with HEPA filtered vacuums. 14. Wet mop with disinfectant. 15. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction. 16. Contain construction waste before transport in tightly covered containers. 17. Cover transport receptacles or carts. Tape covering. 18. Remove or isolate HVAC system in areas where work is being performed.			
Class V		19. Obtain infection control permit before construction begins. 20. Isolate HVAC system in area where work is being done to prevent contamination of the duct system. 21. Complete all critical barriers or implement control cube method before construction begins. 22. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units. 23. Do not remove barriers from work area until complete project is thoroughly cleaned by Environmental Services Department.			
Class VI		24. Obtain infection control permit before construction begins. 25. Isolate HVAC system in areas where work is being done to prevent contamination of duct systems. 26. Complete all critical barriers or implement control cube method before construction beings. 27. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units. 28. Seal holes, pipes, conduits, and punctures appropriately. 29. 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 the work site. 30. All personnel entering work site are required to wear shoe covers.			
COTR			Date		Infection Control Nurse
Project Manager			Date		Contractor
					Date

**Description of Required Infection Control Precautions by Class  
During Construction Project**

**Upon Completion of Project**

Class I	<ol style="list-style-type: none"> <li>1. Execute work by methods to minimize raising dust from construction operations.</li> <li>2. Immediately replace a ceiling tile displaced for visual inspection.</li> </ol>	
Class II	<ol style="list-style-type: none"> <li>1. Provide active means to prevent airborne dust from dispersing into atmosphere.</li> <li>2. Water mist work surfaces to control dust while cutting.</li> <li>3. Seal unused doors with duct tape.</li> <li>4. Block off and seal air vents.</li> <li>5. Place dust mat at entrance and exit of work area.</li> <li>6. Remove or isolate HVAC system in areas where work is being performed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Wipe work surfaces with disinfectant.</li> <li>2. Contain construction waste before transport in tightly covered containers.</li> <li>3. Wet mop and/or vacuum with HEPA filtered vacuum before leaving work area.</li> <li>4. Remove isolation of HVAC system in areas where work is being performed.</li> </ol>
Class III	<ol style="list-style-type: none"> <li>1. Remove or isolate HVAC system in areas where work is being done to prevent contamination of duct system.</li> <li>2. 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 or vacuuming prior to exit) before construction begins.</li> <li>3. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units.</li> <li>4. Contain construction waste before transport in tightly covered containers.</li> <li>5. Cover transport receptacles or carts. Tape covering unless solid lid.</li> </ol>	<ol style="list-style-type: none"> <li>1. Do not remove barriers from work area until completed project is inspected by the owner's Safety Department and Infection Control Department and thoroughly cleaned by the owner's Environmental Services Department.</li> <li>2. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction.</li> <li>3. Vacuum work area with HEPA filtered vacuums.</li> <li>4. Wet mop area with disinfectant.</li> <li>5. Remove isolation of HVAC system in areas where work is being performed.</li> </ol>
Class IV	<ol style="list-style-type: none"> <li>1. Remove or isolate HVAC system in areas where work is being done to prevent contamination of duct system.</li> <li>2. 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 or vacuuming prior to exit) before construction begins.</li> <li>3. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units.</li> <li>4. Seal holes, pipes, conduits, and punctures appropriately.</li> <li>5. 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 the work site.</li> <li>6. All personnel entering work site area required to wear shoe covers. Shoe covers must be changed each time the worker exits the work area.</li> <li>7. Do not remove barriers from work area until completed project is inspected by the owner's Safety Department and Infection Control Department and thoroughly cleaned by the owner's Environmental Services Department.</li> <li>8. COR to monitor manometer readings to confirm negative pressure.</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove barrier material carefully to minimize spreading of dirt and debris associated with construction.</li> <li>2. Contain construction waste before transport in tightly covered containers.</li> <li>3. Cover transport receptacles or carts. Tape covering unless solid lid.</li> <li>4. Vacuum work area with HEPA filtered vacuums.</li> <li>5. Wet mop area with disinfectant.</li> <li>6. Remove isolation of HVAC system in areas where work is being performed.</li> </ol>

Adapted with permission of Virginia Kennedy and Bonnie Barnard, St. Luke's Episcopal Hospital, Huston, TX,  
[www.icanprevent.com](http://www.icanprevent.com).

# Water Distribution Sanitizing and Testing Report

All renovations and additions to the facility's water distribution lines must be sanitized prior to connection to the existing water system.

From CFM specification Section 221100 FACILITY WATER DISTRIBUTION:

## 3.3 STERILIZATION

- A. After (leak) tests have been successfully completed, thoroughly flush and sterilize the interior domestic water distribution system in accordance with AWWA C651.
- B. Use NSF approved liquid chlorine (or NSF approved) for sterilization.

## Contractor shall:

- A. Flush, sanitize and test newly modified lines prior to connecting to the existing distribution system.
- B. Isolate all areas to be renovated from the existing system prior to demolition.
- C. Provide a flushing and sanitizing plan to the COR for review and approval.
- D. Provide a testing plan to the COR for review and approval.
- E. Complete the following table and attach the bacteriological test report.

Date\_\_\_\_\_

Loc/Room Number 10% Point of Use					
Chlorination (PPM)					
Contact Time (HRS)					
Results					

Nearest point of use to supply source and most remote point of use must be bacteriological tested.

Positive bacteriological results must be retreated and retested.

Comments:\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Contractor Project Manager

\_\_\_\_\_  
Contracting Officer Representative

\_\_\_\_\_  
Infection Control Nurse



### Infection Control Orientation – Construction Service Workers

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

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

1. Medical Waste:

- a. *We will remove any medical waste, including sharps containers (for used needles and syringes), from construction areas prior to the start of the projects.*
- b. *If you (contract workers) find any needles, syringes, sharp medical objects, please notify Infection Control (x2916/3393) **IMMEDIATELY.***

2. Barrier Walls:

- a. *The construction areas **MUST** be kept separated from patient care areas by barriers that keep the dust and dirt inside the worksite.*
- b. *The walls must provide a complete seal of the construction area from adjacent areas (walls may be rigid or 4 or 6 mil thickness plastic).*



3. Environmental Control:

- a. *Negative air pressure must be maintained within the construction area.*
- b. *Demolition debris is removed in tightly fitted covered carts – use specified traffic patterns.*
- c. *Sticky or walk-off mats are placed immediately outside the construction zone and changed whenever necessary to control the spread of dust and dirt.*
- d. *Exterior window seals are to be used to reduce the amount of outside excavation debris coming into the building.*
- e. *If demolition chutes are used, they must be sealed when not in use; the chute and damper should be sprayed with water, as necessary to maintain dust control.*
- f. *Control, collection and disposal must be provided for any drain liquid or sludge found when demolishing plumbing.*

4. Traffic Control:

- a. *Use designated entry and exit procedures.*
- b. *Keep all egress pathways free of debris.*
- c. *No unauthorized personnel should be allowed to enter construction areas.*
- d. *Use designated elevators only.*

5. Cleaning:

- a. *Keep the construction area clean on a daily basis.*
- b. *Dust and dirt **must** be kept to a minimum.*

6. Workers:

- a. *Clothing must be free of loose soil and debris when exiting the construction area.*
- b. *Use personal protective equipment (masks, face shields, etc.) as indicated for the task at hand.*
- c. *Handwashing is the best method of reducing the transmission of infection: always wash your hands with soap and water after visiting the restroom, before eating, when leaving the construction site.*

## *MOLD REMOVAL GUIDELINES*

### *A. MOLD REMOVAL PROCEDURES*

1. If mold is suspected in a building, Safety and/or Infection Control will survey for visible mold growth. If visible mold growth is found, Facilities Management Engineering will survey the area to find the source of the moisture, such as a leak of condensation that is causing the mold growth. When visible mold growth is found, it will be removed in accordance with these procedures. Some leaks, especially roof leaks, may take longer to fix than others and extra precautions will be taken in the interim to minimize mold growth.
2. In some cases, mold may grow behind walls, or in other contained, non-visible spaces. If hidden mold growth is suspected in an area after flood or other occurrence of water in the area, a moisture meter will be used to try to locate the hidden mold. If hidden mold is found, it will be removed in accordance with these procedures. If necessary, a section of the wall will be cut out to allow drying.
3. Removal of visible mold will be done according to procedures based on the EPA guidance document *"Mold Remediation in Schools and Commercial Buildings"* printed in March of 2001 and follow the Joint Commission Environment of Care Standards. An Infection Control Risk Assessment will be completed when mold remediation activities qualify as Type C or Type D, and for Type B activities in the highest risk areas, as designated on the Risk Assessment, Appendix B. Staff performing environmental interventions must have training developed by Infection Control and Safety. If there are water damaged materials adjacent to moldy materials, Safety will be consulted to determine if water damaged materials should be removed as well. Some water-damaged materials may harbor mold growth that is not yet visible.
4. In most cases, such as replacement of a few ceiling tiles or removal of mold on limited hard surfaces, containment and use of PPE will not be required for mold removal.
5. In rare cases where there is excessive visible mold in a room or space, it must be cleaned or removed in a contained area. Examples of occasions where containment would be required include work that is expected to generate a moderate to high level of dust, such as removal of building components or demolition of mold contaminated materials.
  - a. When these conditions occur, the moldy area will be sealed off from the remainder of the room or buildings with one or two layers of heavy plastic sheeting. Any ventilation ducts in the space will be sealed off with plastic. The area will be kept under slight

negative pressure either with a fan that exhaust directly to the outside or a fan that HEPA filters air and exhausts it back into the building interior. When containment is required, no mold remediation work will be done until containment is set up.

b. Employees performing mold remediation in containment areas must wear personal protective equipment (PPE). The following is required as a minimum: N-95 or half-face respirator with HEPA filter (with current fit test), disposable coveralls, and goggles to protect the eyes from dust. A Powered Air Purifier Respirator (PARR) with HEPA filter can be substituted for the minimum respirator required, and a full-face PAPR or respirator will eliminate the need for dust goggles. If construction equipment will be used that requires additional eye protection, that eye protection must be used as well. Disposable PPE, including the coveralls, must be removed upon leaving the containment area, to prevent potentially moldy dust from being carried through the building. Non-disposable PPE should be rinsed or wiped off before it is removed from the containment area.

c. After all moldy materials are cleaned or removed, dust should be cleaned from all surfaces in the containment area before the containment is removed. Reconstruction of building walls and other fixtures may be completed after the containment is removed. If reconstruction work will create dust, it is strongly recommended that the reconstruction work be done before the containment is cleaned and removed to minimize dust transmission associated with the reconstruction work.

6. If mold growth is found on any non-porous building surfaces or furnishings, such as metal surfaces, concrete, or vinyl floor tile, these surfaces can be thoroughly cleaned and treated with a standard hospital disinfectant solution that is antifungal. Bleach will not be used because of variations in concentration, the absence of a surfactant, and the potential for corrosion/staining. Consult the Industrial Hygienist for proper PPE to be worn while doing the work.
7. If mold growth is found on any porous building materials or furnishings, such as ceiling tiles, wallboard, carpet, fabrics, books, or papers, the moldy portion of those materials or furnishings must be removed and disposed of. Small items or small pieces will be double-bagged using 6-mil polyethylene sheeting and then discarded as ordinary construction waste. Large items should be covered with polyethylene sheeting and sealed with duct tape before they are removed from the area. Precautions must be taken to contain or remove all dust before waste is removed from the containment area into the remainder of the building. Consult the Industrial Hygienist for proper PPE to be worn while doing the work.

8. Ceiling tiles that are known to be or suspected of being moldy should be removed in the following manner unless they are removed inside a containment area: Lift an adjacent ceiling tile that is not suspected of being moldy. Use that opening to observe the tops of ceiling tiles to determine the presence of mold visible from the top. Identify all moldy tiles in the area. For each moldy tile, spray both top and bottom surfaces with a soap or detergent solution. Use enough solution to cover the entire tile surface, but not enough to drip. Once both the top and bottom are dampened, carefully lift the tile, minimizing any impacts that could jar loose any debris. Immediately place the entire tile into a plastic bag for disposal. Seal the bag containing the removed tiles before leaving the area. If the leak that wetted the tiles has been eliminated, replace the tiles with fresh ones. If not, replace the tile with a drip basin that will collect any further drips and that can be emptied, keeping all building materials dry.

**B. TRAINING**

*The Industrial Hygienist will be responsible for training all FMS employees involved with mold remediation activities. The training will be conducted annually and will consist of:*

- 1. Awareness of mold in the workplace*
- 2. The use of PPE when necessary*
- 3. Removal of mold under EPA Guidelines, Mold Remediation in Schools and Commercial Buildings*
- 4. Proper disposal of moldy materials and disposable PPE*

## Preconstruction Risk Assessment

### I. PURPOSE

The purpose of this attachment is to establish policy and procedures to ensure that safety and the environment of care in all patient care buildings is not compromised during any project renovations or new construction. When planning demolition, construction, or renovation work, the Engineering Project Section, and the Safety Officer will conduct a pro-active risk assessment using risk criteria to identify hazards that could potentially compromise patient care in occupied areas of the buildings. The risk criteria shall address the impact that demolition, renovation, or new construction activities will have on air quality requirements, utility requirements, noise, vibration, and emergency procedures.

### II. POLICY

The VA Pittsburgh will ensure that safety and environment of care will not be adversely affected due to project renovation or new construction. The VA Pittsburgh Medical Center supports a multi-disciplinary, systematic proactive risk assessment program during all phases of construction/renovation to identify hazards to patient care, to take appropriate actions to reduce risk, and to minimize the impact of these activities. All renovation or construction projects will be reviewed with Contractor Officer I Representative (COR) and the Safety Office during the planning phases.

- A. COR and the Safety Office will participate in meetings and area walk-through inspections as necessary. Walk through inspections by the Safety Department may be conducted without prior notice.
- B. All contractors, including subcontractors, Project Coordinators, and Facilities Management employees must follow the preconstruction risk assessment control procedures as described in this guideline.
- C. General Contractor is responsible for identifying all potential construction risks as outlined in Preconstruction Risk Assessment (Attachment E, page 5 of 8) and to submit a schedule to COR for review and approval prior to commencement of construction.

### III. RESPONSIBILITIES

The Medical Center Director will assure that all project coordinators, engineers, COR's, Supervisor of Projects, and Safety conduct a Preconstruction Risk Assessment. This assessment will identify all potential construction

- A. Hazards of projects involving construction and/or renovation of clinical and non-clinical areas in the medical center.
- B. Project Engineering and Safety are responsible for:
  - a. Monitor and respond to safety and hazards relating to issues during construction and renovation projects.
  - b. Upon request, conduct assessments of the hazardous conditions.
  - c. COR will submit the approved construction schedule (reference Part II. C. of this attachment). This schedule will provide details of construction progress identifying hazards of construction and means for controlling these risks as outlined in the Pre-Construction Risk Assessment (Attachment E, page 5 of 8), Lockout-Tag out System Procedures FMS-010, and Utility Outages Policy FMS-14.
  - d. The Project Engineer (COR) will issue the Preconstruction Risk Assessment Permit upon acceptance of schedule submitted by the contractor.

#### IV. PROCEDURES

- A. Planning Phase
  - a. Projects Section and the Safety Office will participate in the project pre-construction meeting.
  - b. Projects Section, Safety Officer, and General Contractor will be involved in the planning phases for all renovation and new construction projects and have input specific to the following major components (design):
    - i. Design to control and minimize construction hazards control practices as outlined below:
      - 1. Noise.
      - 2. Vibrations
      - 3. Air Quality
      - 4. Traffic Control.
      - 5. Emergency Procedures (Proactive/Reactive Measures)
      - 6. Utility Requirements (Shut Downs, Tie-in's)

These hazards could potentially compromise patient care during project construction and renovation. This group will take

appropriate action to reduce the risk and impact on patient care. Assessment, action, and schedule will be documented and maintained with the project files located in the office of the Facilities Management, Projects Section. A Preconstruction Risk Assessment shall be used. The completed permit will be posted at the construction entrance.

c. The contractor will complete the Preconstruction Risk Assessment (Attachment A) and corresponding schedule. Both these documents will be submitted to the COR with the construction schedule per contract documents and General Requirements 01 00 00. Construction will not commence until PCRA permit and construction schedule area approved by COR. The PCRA Permit will then be signed by the Contractor, COR, and/or the VA MIT/M&R, and the Safety Officer.

d. Contractor to comply with VA Pittsburgh Healthcare System Standard Operating Procedure, Lockout-Tag out System Procedures, FMS-010., VA Pittsburgh Healthcare System Standard Operating Procedure, Utility Outages, FMS-014, OSHA Regulation, and all VA Security Policies.

e. Installations/minor improvement projects, likewise, require a completed Preconstruction Risk Assessment. Persons requesting the installation/ minor improvement project (i.e. IT, Interior Design, service line business manager) must complete the assessment and permit allowing sufficient time prior to the start of the project, with the assistance of the Safety Officer.

B. Operational Phase

a. The Safety Officer or designee will address specific construction control concerns to the Project Coordinator and/or COR. These issues will be resolved with the contractor for incorporation into the construction schedule. This schedule is a required submission as per contract requirements.

b. The Safety Officer, Project Coordinator and/or COR, and other appropriate construction project team members reserve the right to modify the PCRA and add requirements to a project on an individual basis to ensure patient and staff safety.

Education/Training. Contractors and their subcontractors will be educated on required construction hazard control prevention and other safety measures during construction and renovation by using various training mechanisms (i.e., Medical Center Requirements, 01 01 10,

c. General Requirements 01 00 00, OSHA Regulations, National Electrical Codes, NFPA 70, and Life Safety Code).

C. Compliance Monitoring

a. The Project Coordinator and/ or COR will conduct weekly safety inspections. Safety and COR will round construction site weekly as necessary. Safety will notify COR and/or Project Coordinator of any areas of noncompliance. Project Coordinator and/or COR will document activities and require general contractor to immediately rectify any noncompliance findings. Failure of general contractor to immediately resolve noncompliance will result in construction shut down. Once noncompliance is corrected, construction may commence. The contractor is responsible for any lost time due to noncompliance.

b. Projects not in compliance with PCRA permit and Medical Center Policies will be shut down until all issues are resolved. Deficiencies will be reported to the Contracting Officer for immediate correction and mediation.

c. Emergencies and Remediation

i. Potential types of emergencies and the effect on patients and staff should be identified during the preconstruction meetings. Remedial action for each emergency should be established so that a rapid response can occur.

ii. The IH/Safety Officer will function as consultants and provide the necessary expertise and direction to others to help contain and correct emergencies (i.e., water contamination, contamination of the ventilation system, unplanned utility failures), minimizing infection control and safety risks to patients and employees.

V. REFERENCES

- A. The Joint Commission Environment of Care Standards
  - B. VA Pittsburgh Healthcare System Standard Operating Procedure, Lockout-Tag out System Procedures, FMS-010, September 3, 2009
  - C. VA Pittsburgh Healthcare System Standard Operating Procedure, Utility Outages, FMS-014, February 16, 2011
  - D. AIA, Guidelines for Design and Construction of Hospital and Health Care Facilities, 2001.
- OSHA Occupational Safety and Health standards 29 CFR 1910 and 1960  
[www.osha.gov/SLTC/indoorairquality/index.html](http://www.osha.gov/SLTC/indoorairquality/index.html)



<b>Safety Construction Permit</b>		
<b>Location of Construction:</b>	<b>Project Start Date:</b>	
<b>Project Coordinator:</b>	<b>Estimated Duration:</b>	
<b>Contractor Performing Work:</b>	<b>Permit Expiration Date:</b>	
<b>visor:</b>	<b>Telephone:</b>	
<b>Description of project:</b>		
<b>Construction Activities</b>		
<p>The following projects do not require completion of the Pre-construction risk assessment form:</p> <ol style="list-style-type: none"> <li>1. Paint and wallpaper in business offices and non-patient areas.</li> <li>2. Paint in patient room if closed for painting and less than 3 sq.ft. of wall needs patched. Filter for room unit changed after painting.</li> <li>3. Installation of soap dispenser/needle box/paper towel holder in patient room</li> <li>4. Repair of window blind.</li> <li>5. Ceiling tile replacement for areas less than 50% of the total square footage of the room, if not in business offices and non-patient areas.</li> <li>6. Ceiling tile replacement for area less than 5 2 X 2 tiles in a patient area if patient is out of the immediate area and clean up can be accomplished before patient returns.</li> <li>7. Minimum repair of nurse call system/TV/Bed/Telephone.</li> <li>8. Check or replace electric outlet.</li> <li>9. Replace light bulb.</li> <li>10. Unstop sink/commode with no water on floor.</li> <li>11. Unstop commode when water on floor requires maintenance to have Housekeeping clean area immediately.</li> <li>12. Repair medical gas outlet. (Front Body)</li> <li>13. Air balance readings.</li> <li>14. Check air-conditioning.</li> </ol>		
<b>Yes</b>	<b>No</b>	
<b>Will there be noise generated that will impact a department adjacent to, above, or below the construction area?</b>		
		a. If so, these departments must be notified.
		b. How are you going to reduce the noise to an acceptable level?
<b>Yes</b>	<b>No</b>	
<b>Will there be vibration generated that will impact a department adjacent to, above, or below the construction area?</b>		
		a. If so, these departments must be notified each time this type of work will be performed.
		b. How are you going to reduce the vibration to an acceptable level?

Yes	No	
		<p><b>Are Emergency Procedures in place and posted on each job for accidental events that could greatly impact Patient Care or Life Safety to the facility? Included in these procedures are such things as:</b></p> <ul style="list-style-type: none"> <li>Emergency telephone numbers of key departments.</li> <li>A plan that describes where main valves, switches, and controls are for the area in case of an emergency.</li> <li>A plan for unexpected outages.</li> </ul>
<b>Environment</b>		
		<b>Are any of the following environmental hazards present?</b>
		Will hazardous chemicals be used on this project? How will fumes and odors be controlled? <b><i>MSDS Sheets are required.</i></b>
		Is asbestos abatement required on this job? <b><i>If so, notify Safety and FES at the activation.</i></b>
		Will there be hot work done on this project? If there are, then a hot work permit must be posted on the job site. All hot work must have a fire watch assigned to each area while the hot work is being performed.
		Will there be a Confined Space Entry required on this project? If so, the Medical Center's confined space entry program must be followed.
<b>Utility Failures</b>		
		<b>Will any of the following systems be out of service at any time during the project?</b>
		<ul style="list-style-type: none"> <li>Fire alarm (<b><i>If out for more than 4 hours, Interim Life Safety Measures must be implemented.</i></b>)</li> </ul>

		<ul style="list-style-type: none"><li>• Sprinkler <i>(If out for more than 4 hours, Interim Life Safety Measures must be implemented.)</i></li></ul>
		<ul style="list-style-type: none"><li>• Electrical</li></ul>
		<ul style="list-style-type: none"><li>• Domestic water</li></ul>
		<ul style="list-style-type: none"><li>• Oxygen</li></ul>
		<ul style="list-style-type: none"><li>• Sewage</li></ul>

		<ul style="list-style-type: none"> <li>• HVAC</li> </ul>
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Yes	No	
		<b>Will there be any work that will require activation of the Interim Life Safety Measures during this project?</b> <b>Some things that trigger ILSM's to be implemented are but not limited to:</b> <ul style="list-style-type: none"> <li>• Any construction that impacts an EXIT or stairs,</li> <li>• Any construction that impacts major breaches in a fire or smoke wall, (penetration permit required)</li> <li>• Taking the main fire protection system out of service (sprinkler)</li> <li>• Taking the main fire alarm system out of service</li> <li>• Taking the "area" fire or fire alarm systems out of service for more than 4 hours within a 24 hour period</li> </ul>
		<b>Implementation of the ILSM requires a fire watch and the ILSM forms to be completed (forms are to be obtained from the Safety Department).</b>
<b>Additional Safety Concerns</b>		
Yes	No	
		Will construction affect exit routes from occupied areas adjacent to construction site?
		Will project affect traffic patterns in area? <i>If yes, explain plan.</i>
		The following must be completed prior to any construction activities.

Attachment E  
Memorandum EC-051  
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		<ul style="list-style-type: none"> <li>Separation wall must be constructed prior to project beginning.</li> <li>Fire protection systems must remain intact.</li> <li>Provide extra fire extinguishers in work areas.</li> <li>Maintain exit lights in work area.</li> <li>Maintain negative air in construction area (24/7) through duration of project.</li> <li>There cannot be any return air from within the construction area to the rest of the building.</li> <li>Redirect exiting not to go through construction area.</li> <li>Put signs on doors into construction area "Construction Area - Do Not Enter".</li> <li>Maintain daily logs and keep a current Hot Work Permit.</li> <li>Place tacky mats at doors exiting construction area.</li> <li>All debris removal must be by covered cart.</li> <li>Maintain clean and orderly work area.</li> <li>How will this project affect the departments above, below and adjacent to this project?</li> </ul>	
<b>Permit Requested By</b>		<b>Safety Approval</b>	<b>COR/Project Coordinator</b>
<b>Date:</b>		<b>Date:</b>	<b>Date:</b>