

## **Exhibit A**

(Incorporated into Construction Purchase Order Terms and Conditions)

### **OWNER POLICIES**

#### **1. University Compliance Program and Reporting of Suspected Violations of Laws, Regulations, or University Policies**

Washington University wants to ensure that none of its staff, faculty, third-party vendors and service providers, or other contractors feels obligated to participate in activities they consider to be illegal or unethical. All staff, faculty, and contractors are required to comply with federal, state, and local laws and regulations, as well as University policies, including the University's Code of Conduct.

As described in the Code of Conduct, the University Compliance Office maintains a hotline for employees and others to call to report any suspected violations of laws, regulations, or University policies. The hotline number is (314) 362-4998. Calls to the hotline are anonymous unless the caller wishes to give his/her name or phone number. The University Compliance Office is responsible for ensuring issues reported in hotline calls are investigated and resolved.

The federal False Claims Act is intended to prevent and detect fraud, waste, and abuse of government funds. It is a violation of the federal False Claims Act for anyone to knowingly submit, or cause another person to submit, a false claim and receive government funds. Examples of actions that could violate the federal False Claims Act include overcharging the government for services rendered; filing a claim with the government for services that were not rendered; or filing a claim with the government with information known to be false. Anyone who knowingly or intentionally submits a false claim to the federal government is liable for civil penalties of \$5,500 to \$11,000 per claim, plus three times the amount of damage caused by the false claim.

Anyone who suspects a violation of the False Claims Act or any other federal, state, or local law, a University policy, or the University's Code of Conduct is required to promptly report it to University management. Anyone who, in good faith, reports a suspected or actual violation of law, regulation, or University Code of Conduct or policy will be protected from retaliation and retribution as a result of such reporting, regardless of whether or not, after investigation, a violation is found to have occurred. As outlined in the University's Code of Conduct, the following channels are available for informing University management of the suspected violations:

- Report it directly to your supervisor or department head or chair.
- Report it to the related area-specific compliance office.
- Call the University hotline at (314) 362-4998. Reports may be made anonymously.

If issues related to misuse of government funds are not addressed and resolved by the above reporting channels, the federal False Claims Act contains provisions that allow citizens with evidence of false claims against the government to sue, on behalf of the government, in order to recover the improperly charged funds. If the suit ultimately ends in a monetary judgment, the citizen may share in the damages recovered. The federal False Claims Act extends protections to employees who report false claims from retaliation or discrimination by an employer.

#### **2. Drug and Alcohol Policy Statement**

Washington University is committed to maintaining a safe and healthful environment for members of the University community by promoting a drug-free environment as well as one free of the abuse of alcohol. Accordingly, Washington University strictly prohibits the unlawful manufacture, sale, distribution, dispensation, possession or use of controlled substances or alcohol on University property or as a part of any University activity.

### **3. Statement on the use of Tobacco**

It is the policy of Washington University to provide a healthy, comfortable and productive work and learning environment for all faculty, staff and students. All smoking and other use of tobacco products are strictly prohibited within University buildings and on University property, including during breaks and meal times. This policy applies to the entire Washington University community, including, but not limited to all faculty, staff, students, patients, contractors and visitors.

Individuals within the Washington University community are not permitted to smoke or use tobacco products within University owned, leased or occupied facilities or on University owned, leased or occupied property. This includes:

- the physical campuses;
- parking facilities and lots (including in personal vehicles at these locations);
- University owned, leased or rented vehicles;
- within 20 feet of entryways or exits; near air intakes; or near fire/explosion hazards;
- any worksites in which individuals within the University Community work;
- If individuals within the University community smoke or use tobacco products off University properties, they are expected to be respectful of residents, hospitals and businesses neighboring University facilities. They should not loiter in front of homes, hospitals or businesses near University facilities and must discard tobacco products in appropriate receptacles;
- Violations of the policy may result in disciplinary action.

### **4. Concealed Weapons Policy Statement**

The Missouri “concealed carry” law permits qualified individuals who hold either a Missouri permit or a permit from another state to carry concealed firearms throughout the State of Missouri. The law creates certain exceptions making it unlawful for a permit holder to carry a concealed firearm into a number of establishments open to the public, including “any higher education institution” without the consent of the institution’s governing body.

Washington University, a private institution, is a community free from concealed weapons. All students, faculty, staff, visitors, third-party vendors and service providers, and other contractors are prohibited from carrying firearms (concealed or otherwise) on University premises and may not stow any firearm in a vehicle parked in or on a University owned parking lot, facility or metered parking space. This prohibition includes the stowing of firearms in contractor trailers or other vehicles located on University property. The Chief of University Police is the only person empowered to make exceptions to this prohibition and to grant the consent required under the law on all University campuses.

All violations of this policy will be referred to the Washington University Chief of Police.

### **5. Federal Acquisition Regulations Compliance**

It is the policy of Washington University that all purchase orders and contracts issued by Washington University comply with F.A.R. 52.209-6. Contractor warrants that neither Contractor nor its principals is presently debarred, suspended, or proposed for debarment by the federal government. Contractor shall immediately inform Owner’s Representative if Contractor or its principals becomes debarred or is suspended by the federal government.

## 6. Safety Guidelines for Contractors

### INTRODUCTION

The Washington University in St. Louis Safety Guidelines for Contractors are intended to assist Contractors in coordinating University facilities and Contractor operations during construction projects and to protect the University's employees, students, patients, visitors, facilities and surrounding environment as well as construction workers in all construction areas at the University. These Guidelines are basic health and safety requirements of the University that supplement federal, state and local health and safety laws and regulations as well Contractor's own safety programs. In some instances, the Guidelines summarize federal laws and regulations for Contractor's ease of use *only*. **To the extent of any conflict between these Guidelines and federal, state, or local laws and regulations, such laws and regulations control and Contractor shall be responsible for knowing and abiding by the current federal, state and local health and safety laws and regulations governing Contractor's work.** Additionally, Contractors are expected to implement their own comprehensive safety programs and provide training and all necessary safety equipment to workers utilized on any University construction project.

### I. DEFINITIONS

Terms used in these Guidelines are defined as follows:

“Applicable Laws”: All laws, statutes, regulations, ordinances, codes, rules, rulings, decisions and orders of governmental authorities relating to the work or the services with respect to the project.

“Business Manager”: A University employee responsible for the business operations within a University Department.

“Competent Person”: means one who is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous or dangerous, and who has authorization to take prompt corrective measures to eliminate them.

“Confined Space”: A space that is large enough for a person to enter, but has limited means for entry or exit and is not designed for continuous occupancy. Examples include tanks, silos, storage bins, utility vaults, and pits. A permit-required confined space is a confined space that contains potential or known safety hazards. Entry into a permit-required Confined Space is only allowed by trained personnel under an approved permit program.

“Contractor”: Contractor is the person, firm, or corporation with whom a contract is made by the University for the performance of work on University property.

“EH&S”: The University's Office of Environmental Health & Safety.

“Guidelines”: These Washington University in St. Louis Safety Guidelines for Contractors.

“Hazardous Materials”: Any pollutant, hazardous or toxic substance, waste or material, including, but not limited to, oil products, mold, asbestos, asbestos-containing materials, lead, lead-containing materials, urea formaldehyde foam insulation, transformers or other equipment which contain dielectric fluid-containing polychlorinated biphenyls, flammable explosives, radioactive materials or any other material or substance designated or regulated as hazardous or as a toxic substance or waste, pollutant or contaminant under Applicable Laws.

“OSHA”: The United States Department of Labor Occupational Safety & Health Administration.

“Owner's Representative”: The person designated in writing by officers of the University to act on behalf of the University on all matters requiring University approval or authorization.

“Site” or “Jobsite”: The portion of Owner’s premises upon which a project is to be constructed.

“University”: The Washington University, a corporation established by Act of the General Assembly of the State of Missouri approved February 22, 1853 and acts amendatory thereto.

Capitalized terms not defined herein have the meaning set forth in the Washington University in St. Louis General Conditions of Contract.

## **II. BASIC SAFETY**

1. Obey all posted warnings.
2. Contractors must remain in designated areas at all times and use approved travel routes into and out of the work Site.
3. Work areas must be maintained so that all exits and designated thoroughfares through the work Site remain unobstructed at all times.

## **III. GENERAL SAFETY PROCEDURES**

1. Medical Services and First Aid:
  - A. Contractor must make available at the Jobsite a person trained to render first aid and CPR.
  - B. Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.
2. Personal Protective Equipment (PPE)
  - A. Appropriate personal protective equipment shall be worn in all operations where there is an exposure to hazardous conditions, Hazardous Materials or where the need is indicated for using such equipment to reduce the hazard to the employees.
  - B. Eye and Face Protection
    - i. Eye protection must be worn at all times while on the Jobsite. Employees wearing glasses must have approved prescription safety glasses with side shields or must wear goggles or safety glasses that fit over the prescriptions glasses.
    - ii. Face protection shall be provided and must be worn when operations present potential face injury.
    - iii. Eye and face protective equipment shall meet the requirements of ANSI Z87.1-1991, “Practice for Occupational and Educational Eye and Face Protection.”
    - iv. Filter lenses or plates of at least the proper shade number will be provided and are to be worn by workers involved in welding operations.
    - v. Contractor employees exposed to laser beams shall be furnished suitable laser safety goggles that will protect for the specific wavelength of the laser and optical density adequate for laser involved.
  - C. Hard hats shall be worn at all times to prevent potential head injuries from impact, flying or falling objects, or electrical shock and burns. Hard hats shall meet the performance requirements of ANSI Z89.1, “Standard for Industrial Protective Helmets.”

D. Hearing Protection

- i. Feasible engineering or administrative controls shall be utilized to protect employees against sound levels in excess of 85 decibels for an 8-hour time-weighted average.
- ii. In all cases where the sound levels exceed the values shown in safety and health regulations, a hearing conservation program shall be administered by the Contractor.
- iii. Cotton earplugs are not acceptable for hearing protection.

E. Respiratory Protection

- i. Contractors shall have a written respirator protection program that includes respirator training, fit-testing and medical qualification documentation. A copy of this information will be provided to the Owner's Representative.
- ii. Respiratory protective devices approved by the Mine Safety and Health Administration/ National Institute for Occupational Safety and Health for the specific contaminant to which the employee is exposed shall be used.
- iii. Exposure to toxic gases, vapors, fumes, dusts, and mists at a concentration above those specified in the most recent "Threshold Limit Values of Airborne Contaminants" (TLV's) of the ACGIH, or OSHA exposure limits (whichever is lower) shall be avoided.
- iv. Administrative or engineering controls must be implemented whenever feasible to comply with TLV's.
- v. When engineering and administrative controls are not feasible to achieve full compliance, protective equipment or other protective measures shall be used to keep the exposure to employees of air contaminants within the prescribed limits. Any equipment and technical measures used for this purpose must first be approved for each particular use by an industrial hygienist or other person trained and qualified in environmental health and safety matters specific to airborne contaminants.

3. Hand and Power Tools

- A. Electric power operated tools shall either be UL approved double-insulated or be properly grounded. Ground fault circuit interrupters must be used in damp or wet areas.
- B. Only authorized and properly trained employees shall use power tools.
- C. Use of powder actuated tools requires certified operators. Warning signs must be posted in all areas affected by the noise of nail guns.

4. Electrical

- A. All electrical work shall be installed in compliance with the most recent National Electrical Code (NEC).
- B. Only Competent Persons are permitted to work on or within 10 feet of energized conductors or parts and then only under special procedures that will ensure proper employee protection. No Contractor shall permit its employee to work in proximity to any part of an electric power circuit unless the employee is protected against electric shock by de-

energizing the circuit and grounding it or by guarding it by effective insulation or other means.

C. Equipment must not be operated closer than 20 feet from overhead energized power lines unless specific procedures are followed, by qualified persons using appropriate protection equipment.

D. Extension cords used with portable electric tools shall have appropriate grounding. Worn or frayed cords shall not be used.

E. Bulbs on temporary lights shall be equipped with guards or deeply recessed in the reflector. Temporary lights shall not be suspended by electric cord, unless designed for suspension.

F. Each disconnecting means of motors and appliances and each service feeder or branch circuit at the point where it originates shall be legibly marked to indicate its purpose, unless located and arranged so the purpose is evident.

G. All cords and cables passing through work areas shall be covered or elevated.

H. Boxes for disconnecting means shall be securely and rigidly fastened to the surface upon which they are mounted and fitted with covers.

I. All extension cords and cord & plug connected equipment shall be protected by an assigned equipment grounding conductor program.

## 5. Fire Safety

A. Fire Suppression and Fire Alarm systems: Contractor shall contact the Owner's Representative 24 hours before work on these systems. Note: operations that create dust or particles, such as sanding and spray painting, may affect fire alarm systems.

### B. Flammable and Combustible Liquids

i. Flammable and combustible liquids shall only be stored in approved containers and in appropriate quantities for the Jobsite use.

ii. Signs prohibiting smoking shall be posted in service and refueling areas.

iii. Flammable liquids shall be dispensed through grounded and bonded containers.

C. Hot Work (Contact the EH&S for the University's Hot Work Permit policy or access it at <http://www.ehs.wustl.edu/>).

i. Contractors must obtain Hot Work permits 24 hours before performing welding, soldering or torch work from the Owner's Representative.

ii. All Contractor employees shall be instructed in the safe use of welding equipment prior to using the equipment.

iii. No welding, cutting or heating shall be done near the application of flammable paints, other flammable compounds, or heavy dust concentration which could create a fire hazard.

iv. Arc welding and cutting operations shall be shielded by noncombustible or flameproof shields to protect persons from direct arc rays. Visual barrier screens are required for arc-welding operations.

v. When electrode holders are to be left unattended, electrodes shall be removed and the holder shall be placed or protected so that it cannot make electrical contact with employees or conducting objects.

vi. All arc welding and cutting hoses and cables shall be completely insulated and able to handle the maximum current requirements for the job. There shall be no repairs or splices within 10 feet of the electrode holder except where splices are insulated equal to the insulation of the cable.

vii. Fuel gas and oxygen hoses and cables shall be easily distinguishable and shall not be interchangeable.

viii. Hoses and cables shall be inspected at the beginning of each shift and shall be repaired or replaced if defective.

ix. General mechanical or local exhaust ventilation or air - line respirators shall be provided, as required, when welding, cutting or heating the following:

- zinc, lead, cadmium, mercury, or beryllium-bearing, materials in enclosed spaces;
- stainless steel with inert-gas equipment;
- in confined spaces;
- where an unusual condition can cause an unsafe accumulation of contaminants.

x. Contractor shall notify Owner's Representative prior to beginning any Hot Work on the Jobsite.

D. Liquefied Petroleum Gas (LP Gas)

i. Storage of LP Gas within buildings is prohibited.

ii. Each system shall have containers, valves, connectors, manifold valve assemblies, and regulators of an approved type.

iii. All cylinders containing LP Gas shall meet DOT specifications while in transport.

iv. Every container and vaporizer shall be provided with one or more approved safety relief valves or devices.

v. Containers shall be placed upright on firm foundations or otherwise firmly secured (i.e. chained or placed into a cylinder stand).

vi. Portable heaters shall be equipped with an approved automatic device to shut off the flow of gas in the event of flame failure.

vii. Storage locations shall have at least one approved portable fire extinguisher, rated not less than 20-B/C.

- viii. LP Gas systems, containers, devices and storage locations shall be inspected according to the schedule set forth in the applicable fire code that governs the project on which such gas is used.
  - ix. Valve protection caps shall be in place when compressed gas cylinders are transported, moved, or stored.
  - x. Cylinder valves shall be closed when work is finished and when cylinders are empty or moved.
  - xi. Compressed gas cylinders shall be secured in an upright position at all times, except if necessary for short periods of time when cylinders are actually being hoisted or carried. (i.e. chained or placed into a cylinder stand).
  - xii. Cylinders shall be kept at safe distances or shielded from welding or cutting operations. Cylinders shall be placed where they cannot become part of an electrical circuit.
  - xiii. Oxygen and fuel gas regulators shall be in proper working order while in use.
  - xiv. Applicable technical portions of American National Standards Institute, Z49.1, Safety in Welding and Cutting, shall be followed.
6. Storage
- A. All materials stored in tiers shall be secured to prevent sliding, falling, or collapse.
  - B. Aisles and passageways shall be kept clear of debris and tripping hazards.
  - C. Storage of materials shall not obstruct exits.
  - D. Materials shall be stored with due regard to their fire characteristics.
7. Flagpersons
- A. When signs, signals and barricades do not provide the necessary protection on or adjacent to a highway or street, flagpersons or other appropriate traffic controls shall be provided.
  - B. Flag persons shall be provided with and shall wear an appropriately visible warning garment while flagging. Warning garments worn at night shall be made of reflective material.
8. Motor Vehicles and Motorized Equipment
- A. All operators must wear a seat belt while operating motor vehicles and equipment.
  - B. Vehicles must observe designated pedestrian crosswalks, fire lanes, disability parking and the posted speed limit. Unless otherwise posted, there is a campus wide speed limit of 20 mph on roadways. The speed limit is 5 mph with flashers when vehicles are driving through campus. Pedestrians have the right-of-way on all interior walking paths and sidewalks. No vehicle or equipment will be parked in such a manner that it will create an unsafe driving or pedestrian walking condition.



C. No vehicle or equipment shall be parked or left unattended on any roadway or fire lane if it would impede the movement of any emergency response vehicle or firefighting equipment.

D. Passing any bus or shuttle is strictly prohibited unless the bus or shuttle is parked in a designated stop and out of the lane of travel.

E. Heavy equipment must have a functioning back up alarm. The alarm must be used at all times when the equipment is in reverse. The alarm may not be turned off or disconnected at any time.

F. All vehicles in use shall be checked at the beginning of each shift to assure that all parts, equipment, and accessories that affect safe operation are in proper operating condition and free from defects.

G. No person shall use any motor vehicle, earth moving or compacting equipment having an obstructed view to the rear unless the vehicle is backed up only when a Flag Person or equivalent observer signals that it is safe to do so.

H. Heavy machinery, equipment, or parts thereof which are suspended or held aloft shall be substantially blocked to prevent falling or shifting before employees are permitted to work under or between them.

9. Railings and Guardrails

A. A standard railing used to protect personnel from falls shall consist of a top rail, intermediate rail, toe-board, and posts, and have a vertical height of approximately 42 inches from the floor, or platform, to the upper surface of the top rail.

B. The top rail of a railing shall be smooth-surfaced, with a strength able to withstand at least 200 pounds. The intermediate rail shall be approximately halfway between the top rail and floor.

C. A stair railing shall be constructed similar to a standard railing, but the vertical height shall be not more than 34 inches, or less than 30 inches from upper surface of top rail to surface of tread in line with face or riser at forward edge of tread.

10. Ladders

A. Portable ladders shall be placed on a substantial base at a 4 to 1 pitch, have clear access at the top and bottom and extend a minimum of 36 inches above the landing, or where not practical, be provided with grab rails and be secured against movement while in use.

B. Portable metal ladders shall not be used for electrical work or where they may come in contact with electrical conductors.

C. Hand-made ladders shall be constructed for their intended use.

i. Cleats shall be inset into side rails 1/2 inch, or filler blocks used.

ii. Cleats shall be uniformly spaced, 12 inches, top-to-top.

11. Scaffolds

A. Contractors shall comply with OSHA Standards 29 CFR 1926, Subpart L on Scaffolding and 29 CFR 1910.28.

- B. Access to scaffolds shall be limited to authorized personnel only.
- C. Scaffolds shall be erected on a sound, rigid footing, capable of carrying the maximum intended load without settling or displacement.
- D. Scaffolds and their components shall be capable of supporting, without failure, at least 4 times the maximum intended load.
- E. Guardrails and toe-boards shall be installed on all open sides and ends of platforms more than 6 feet above the ground or floor, except needle beam scaffolds and floats. Scaffolds 4 feet to 10 feet in height, having a minimum dimension in either direction of less than 45 inches, shall have standard guardrails installed on all open sides and ends of platform.
- F. Where persons are required to work or pass under a scaffold, there shall be a screen with no more than 1/2-inch openings between the toe-board and the guardrail.
- G. The maximum permissible span for 1 1/4 x 9 inches or wider plank of full thickness is 4 feet, with medium loading of 50 p.s.f.
- H. Scaffold planking shall be overlapped a minimum of 12 inches and secured from movement.
- I. Scaffold planks shall extend over their end supports not less than 6 inches and not more than 12 inches.
- J. All scaffolding and accessories shall be free from defective parts. All defective parts must be immediately replaced or repaired.
- K. An access ladder or equivalent safe access shall be provided and used.

12. Air Tools

- A. Review the manufacturer's instruction before using a tool.
- B. Wear safety glasses or a face shield and, where necessary, safety shoes or boots and hearing protection.
- C. Post warning signs where pneumatic tools are used. Set up screens or shields in areas where nearby workers may be exposed to flying fragments, chips, dust, and excessive noise.
- D. Ensure that the compressed air supplied to the tool is clean and dry. Dust, moisture, and corrosive fumes can damage a tool. An in-line regulator filter and lubricator increases tool life.
- E. Keep tools clean and lubricated, and maintain them according to the manufacturers' instructions.
- F. Use only the attachments that the manufacturer recommends for the tools you are using.
- G. Be careful to prevent hands, feet, or body from injury in case the machine slips or the tool breaks.
- H. Reduce physical fatigue by supporting heavy tools with a counter-balance wherever possible.

- I. Use the proper hose and fittings of the correct diameter.
- J. Use hoses specifically designed to resist abrasion, cutting, crushing and failure from continuous flexing.
- K. Choose air-supply hoses that have a minimum working pressure rating of 1035 kPa (150 psig) or 150% of the maximum pressure produced in the system, whichever is higher.
- L. Check hoses regularly for cuts, bulges and abrasions. Tag and replace, if defective.
- M. Blow out the air line before connecting a tool. Hold hose firmly and blow away from yourself and others.
- N. Make sure that hose connections fit properly and are equipped with a mechanical means of securing the connection (e.g., chain, wire, or positive locking device).
- O. Install quick disconnects of a pressure-release type rather than a disengagement type. Attach the male end of the connector to the tool, NOT the hose.
- P. Do not operate the tool at a pressure above the manufacturer's rating.
- Q. Turn off the air pressure to hose when not in use or when changing power tools.
- R. Do not carry a pneumatic tool by its hose.
- S. Avoid creating trip hazards caused by hoses laid across walkways or curled underfoot.
- T. Do not use compressed air to blow debris or to clean dirt from clothes.
- U. Do not use compressed air for cleaning unless no alternate method of cleaning is available. The nozzle pressure must remain below 207 kPa (30 psi). Personal protective equipment and effective chip guarding techniques must be used.

13. Hoists and Cranes. OSHA construction crane standards requirements are found in Subpart N, 29 CFR 1926 550. **Some** key requirements state (**for complete details consult the OSHA regulations**):

- A. The employer (Contractor) shall comply with the manufacturer's specifications and limitations applicable to the operation of any and all cranes and derricks. Where manufacturer's specifications are not available, the limitations assigned to the equipment shall be based on the determinations of a qualified engineer competent in this field and such determinations will be appropriately documented and recorded. Attachments used with cranes shall not exceed the capacity, rating, or scope recommended by the manufacturer.
- B. Rated load capacities, and recommended operating speeds, special hazard warnings, or instruction, shall be conspicuously posted on all equipment. Instructions or warnings shall be visible to the operator while he is at his control station.
- C. The employer (Contractor) shall designate a Competent Person who shall inspect all machinery and equipment prior to each use, and during use, to make sure it is in safe operating condition. Any deficiencies shall be repaired, or defective parts replaced, before continued use.
- D. A thorough, annual inspection of the hoisting machinery shall be made by a Competent Person or by a government or private agency recognized by the U.S. Department

of Labor. The employer (Contractor) shall maintain a record of the dates and results of inspections for each hoisting machine and piece of equipment.

E. Except where electrical distribution and transmission lines have been de-energized and visibly grounded at point of work or where insulating barriers, not a part of or an attachment to the equipment or machinery, have been erected to prevent physical contact with the lines, equipment or machines shall be operated approximate to power lines only in accordance with the following:

i. For lines rated 50 kV or below, minimum clearance between the lines and any part of the crane or load shall be 10 feet;

ii. For lines rated over 50 kV, minimum clearance between the lines and any part of the crane or load shall be 10 feet plus 0.4 inch for each 1 kV over 50 kV, or twice the length of the line insulator, but never less than 10 feet;

iii. A person shall be designated to observe clearance of the equipment and give timely warning for all operations, where it is difficult for the operator to maintain the desired clearance by visual means;

iv. Any overhead wire shall be considered to be an energized line unless and until the person owning such line or the electrical utility authorities indicate that it is not an energized line and it has been visibly grounded.

F. No modifications or additions which affect the capacity or safe operation of the equipment shall be made by the employer (Contractor) without the manufacturer's written approval. In no case shall the original safety factor of the equipment be reduced.

14. Temporary Lighting. Contractor shall provide, install and maintain adequate temporary lighting to ensure safety and security for the Jobsite. This lighting will include lighting removed as part of the project, but that is still necessary to light streets, sidewalks and walking paths adjacent to the construction or renovation project for use by employees, patients, students, faculty, staff or visitors to the University.

15. Temporary Sidewalks. Contractor shall provide, install and maintain adequate temporary sidewalks to ensure pedestrian safety on and around the Jobsite. These sidewalks will include sidewalks removed as part of the project, but still necessary for use during construction by employees, students, faculty, staff or visitors to the University.

16. Falling Object Prevention & Protection

A. Preventive measures must be put in place to protect workers and the public exposed to the project from being struck by construction tools, material, or debris that may fall or be blown from upper levels.

B. Materials such as precast, heavy formwork tables, and post shores need to be secured/restrained to prevent initial displacement.

i. On projects where there is a possibility of injury to the public from falling objects Contractor shall supply and erect solid orange mesh material containment fencing around the appropriate area to reduce the risk of exposures to falling objects.

ii. Orange mesh attached to the standard guard rail may be used as an acceptable method of preventing falling objects from injuring workers below.

- iii. Toe boards shall be installed around all floor and roof openings, elevated work platforms and scaffolds where tools, debris or equipment may fall onto persons below. Toe boards must be strong enough to withstand a force of at least 50 lbs applied in any downward or outward direction. Toe boards must be at least 3 ½ inches high.
  - iv. Floor holes, chases, shafts and sleeves shall be protected to prevent objects from falling to lower levels.
  - v. Ingress/egress shall be allowed in designated areas only. Areas or openings not designated for ingress/egress shall have effective barriers to prevent people from entering and exiting the structure. All designated ingress/egress locations shall have overhead falling object protection.
  - vi. The ingress/egress access shall be a walk-through style. The canopy must be capable of withstanding the expected impact and sustaining loads of 300 lb/ft<sup>2</sup>. The height clearance shall be at least 7 foot and at least 5 foot in width. Adequate clearance must be provided to satisfy all applicable Building, Fire and Life Safety Codes. Total egress must meet all applicable Codes.
17. Facilities, equipment, tools and vehicles. All Jobsite facilities equipment, tools and vehicles must be properly designed and safely maintained. All Jobsite facilities, equipment, and activities must comply with the applicable governmental regulations including OSHA and EPA regulations. Proper stairways, ladders, platforms, and guardrails must be provided in compliance with OSHA regulations to ensure employee safety. All equipment tools and vehicles must be used in accordance with manufacturers operating instructions.
18. Education and training.
- A. All Contractors, managers, supervisors, and employees must be properly trained to evaluate and control Jobsite safety and health hazards. Specific training must be provided concerning the safety rules and procedures pertaining to the jobs being performed.
  - B. Contractors should instruct each employee to recognize and avoid unsafe conditions, the regulations applicable to his or her environment, and how to control or eliminate any hazards or other exposure to illnesses or injury.
19. Inspections.
- A. Contractors shall perform frequent and regular safety inspections. Inspections are to be documented weekly on all Jobsites and daily in hospital areas.
  - B. Contractors should have a designated Site Safety Coordinator available for each Jobsite. The Contractor's Site Safety Coordinator will be identified to the Owner's Representative at the start of the project.
20. Emergency procedures. All employees must know, understand, and be able to follow all workplace emergency procedures pertaining to their assignment. On School of Medicine projects contact Protective Services at 362-HELP (362-4357). On all other campuses of the University contact the Washington University Police Department at 935-5555.
21. Accidents. All accidents, injuries, illnesses, and near misses that occur on the Jobsite must immediately be reported to the Owner's Representative for that project. Contractor shall keep and maintain all monthly incident reports in accordance with OSHA regulations and shall provide the University with a copy of such reports upon request.

22. Accident record keeping and reporting requirements. Immediately after its occurrence (and in NO event more than 8 hours after such occurrence), an accident which is fatal to one or more employees or which results in the hospitalization of three or more employees shall be reported by the Contractor to the Owner's Representative and to the nearest OSHA Area Director.

#### **IV. SPECIAL PROCEDURES AND WORK PERMITS**

The following special procedures are specific to the University. Although some topics listed below are covered by regulations, they receive special interest in hospital, research and academic areas. The work permits noted below are to assist in coordinating contractor work activities and University activities affecting the same systems. Failure of the Contractor to request the appropriate work permits from the Owner's Representative in advance may negatively impact scheduling.

1. Federal, State and Local Agencies

Immediately contact the Owner's Representative whenever a federal, state or local governmental authority contacts you or arrives on-site in relation to any health, safety or environmental concern. It is the responsibility of the Owner's Representative to contact EH&S immediately.

2. Hazardous Materials/Hazardous Work

A. Hazard Communication and Chemical Safety

i. Contractor shall have copies of Material Safety Data Sheets (MSDS) available at the Jobsite for review by University personnel.

ii. Upon request of the University or Owner's Representative, Contractor shall make its hazard communication program available to the University and its personnel for review.

B. Paint

i. Advise EH&S prior to beginning any painting operations at the University. Identify the location of the painting projects as well as a current schedule. Advise EH&S of any changes to the schedule or products being used.

ii. Use paints and primers that contain non-toxic materials. Use water-based paints instead of solvent base paints when possible. If possible, use an odor-reducing additive to minimize odor from vapors.

iii. Painting operations at the medical school campus may be conducted only within the following hours unless otherwise permitted in writing by the University: from 7 a.m. to 3 p.m. in patient care areas and from 6 p.m. to 5 a.m. in non-patient care areas.

iv. The Material Safety Data Sheet (MSDS) for all materials used must be kept on Site and available for review upon request.

v. Mix paints in a well-ventilated area. DO NOT mix paints in the hospital.

vi. Contact the Owner's Representative to determine if charcoal filter and/ or carbon filter should be used in the work area during painting.

vii. All supply, return, and exhaust grills will be covered with plastic. Contact the Owner's Representative for guidelines and recommendations regarding the ventilation system.

- viii. Doors shall be covered with plastic from the inside during the painting operation. In addition post a sign stating “**PAINTING IN PROGRESS. PLEASE DO NOT ENTER**” to the outside of the door. After the painting is completed, the door to the room shall be sealed with plastic from the outside and a sign stating “**PLEASE DO NOT ENTER**” should be posted on the outside of the door.
- ix. Provide and utilize personal protective equipment necessary to ensure workers are not exposed to hazardous materials, fumes or vapors.
- C. Fluorescent light bulbs & PCB containing ballasts disposal:
- i. Personnel removing and discarding fluorescent light bulbs are responsible for determining if the bulb should be recycled due to mercury vapor & lead content and for making sure the bulbs are moved to the designated collection point. To dispose of fluorescent light bulbs, contact the Owner’s Representative.
- ii. Personnel removing ballasts from fluorescent light fixtures are responsible for determining if it contains PCBs (Polychlorinated Biphenyl’s), removing any PCB containing ballast’s from the fixture, placing each ballast into proper containers, labeling the container to indicate that it contains PCBs and making sure the containers are moved to a central collection point.
- D. Plumbing Work – Discovery of Hazardous Materials/Waste:
- i. If liquid mercury or sharps are discovered in plumbing, collect in a bucket or pail with a lid, label and notify the Owner’s Representative and EH&S.
- ii. If it is anticipated that Contractor’s employees or subcontractors could come into contact with blood borne pathogens while working at the University, then it is mandatory that such individuals have training in blood borne pathogen awareness.
- iii. If applicable, Contractor must maintain appropriate documentation of its employees’ training in blood borne pathogens awareness. Contractor shall offer affected employees hepatitis B vaccination. The affected employees must either receive the hepatitis B vaccination or sign a letter declining such vaccination. Contractor must keep records of employee hepatitis B vaccinations or offers (and decline) for such vaccination.
- E. Fume Hoods. The contractor will contact the Owner’s Representative prior to the start of construction or renovations that could possibly involve chemical fume hoods and related duct work. The Owner’s Representative will then contact EH&S to determine if testing of the fume hood or ducts is necessary.
- F. Biological Safety Cabinets (BSC’s). The Contractor will contact the Owner’s Representative to request a Hazardous Work Permit from EH&S at least one week before moving or repairing cabinets or related ductwork.
- G. Cold/Warm Room and related equipment. The Contractor will contact the Owner’s Representative to request a Hazardous Work Permit from EH&S, University Hazardous Materials Manager and Environmental Compliance Officer at least one week before moving or repairing Cold/Warm Room or related equipment.
- H. Rooftop work. May require a Hazardous Work Permit due to possible respiratory hazards. The Contractor will contact the Owner’s Representative to secure the Hazardous Work Permit from EH&S at least two weeks before accessing the roofs. Respirators may be required.

I. Steam Tunnel work. Welding or other operations that may create additional hazards will need a Hazardous Work Permit, Hot Work Permit or Confined Space Entry Permit. The Contractor will contact the Owner’s Representative to request a hazardous Work Permit from EH&S at least two weeks before starting such operations in steam tunnels.

3. Underground Utility Location

Anyone proposing to excavate, dig, bore, tunnel, or disturb the earth in any manner which may damage buried utilities is required to contact the Owner’s Representative at least 72 hours (3 working days) before starting the proposed work.

4. Mechanical or Electrical Service Interruptions

Call the Owner’s Representative 48 hours prior to starting proposed work that could interrupt utilities. The following is a list of services that could be affected by service interruptions. The list is provided as an example of affected services and is not intended to be all-inclusive of all possible service interruptions:

Exhaust Systems	Deionized H2O
Air Supply Systems	CO2
Vacuum Systems	Medical Gas
Chilled H2O	Electric
Steam	Potable H2O
Fire Suppression	Telecommunications & Data
Irrigation	Fire Alarm Systems

5. Excavations and Trenches

A. All excavations and trenching will be managed by the University’s Owner’s Representative. The Contractor shall notify the Owner’s Representative prior to beginning trenching or excavation work in roadways.

B. All underground utilities and nearest shutoff stations or valves must be located prior to commencement of work.

C. A daily inspection of the excavations, shoring systems, adjacent areas, and protective systems shall be performed by a Competent Person.

D. Trenches more than 5 feet deep require approved shoring or sloping.

E. To prevent persons from falling into an open trench substantial fencing or barricades shall be lighted “flashing” and maintained around the perimeter of the trench. This is especially important for trenches that must remain open overnight. A plastic tape is not a substitute for this purpose.

F. Ladders will be provided at least every 25 feet for access to trenches over 4 feet deep.



G. In order to provide a safe footing at the edge of the excavation, and to prevent spoil and materials falling into an excavation, a clear space at least 2' wide shall be maintained on all sides.

6. Electrical Hazards

A. Contractor shall establish and maintain an effective electrical safety-related work practices program as required by OSHA. References for such a program include OSHA standard CFR 1926 Subpart K Electrical and the National Fire Protection Association (NFPA) 70E: Standard for Electrical Safety in the Workplace.

B. Training shall be documented for all employees who face a risk of electric shock from working on, or near, electrical circuits, which are not reduced to a safe level by electrical insulation.

7. Lockout/Tag out

A. OSHA's lockout/tag out standard (the control of hazardous energy standard) in 29 CFR 1926.417 and 1910.147 will be followed by all Contractors on all Jobsites at the University. Prior to performing any lockout/tag out procedures, Contractor shall first notify Owner's Representative. The OSHA lockout/tag out procedure requires **at a minimum (for additional requirements consult OSHA regulations)**:

- Use of locks and/or tags on energy isolating devices.
- Special lockout/tag out procedures for jobs requiring multiple lockout/tagout devices.
- Contractors must provide their own lockout/tag out equipment.
- All Contractor employees, (authorized, affected, and other employees), must be trained by the Contractor (or another acceptable training source) concerning lockout/tag out procedures.
- An annual inspection shall be conducted by an authorized employee of the Contractor to evaluate the implementation and efficacy of lockout/tag out procedures.
- Locks and/or tags must not be removed by anyone other than the employee applying them except under a special, approved permit.
- Testing or positioning of machines or equipment will be performed only under special procedures per OSHA 29 CFR 1910.147(f).

B. Procedures. All Contractors will have a general lockout/tag out program prior to performing work at the University. A written form will be required for lockout/tagout procedures for machinery or equipment which require more than one energy isolating device to be locked and/or tagged. Contractors are required to coordinate with Owner's Representative to ensure that lockout/tag out procedures are communicated to affected Facilities Managers.

C. Training. All Contractor employees will be trained by the Contractor (or another acceptable training source) concerning the lockout/tag out procedures prior to beginning work at the Site. A record will be kept of all employees trained and verification (by exam or other written means) that they understood the training they received. The training will include the disciplinary actions that will be taken if lockout/tag out procedures are not

followed. Documentation of training shall be provided to the Owner's Representative upon request.

D. Inspections. Audits and inspections of the lockout/tag out procedures will be conducted routinely by Contractor's foreman, supervisor, or on-site safety personnel. A record will be kept of the inspections and the follow-up action taken and Contractor shall provide copies to the Owner's Representative.

8. Confined Space Entry Program

A. Confined spaces potentially present serious hazards to individuals entering such spaces including but not limited to: oxygen deficiency, toxic materials, flammable materials, and hazardous energy. Each Contractor must establish and maintain an effective confined space entry procedure that complies with OSHA standard 29 CFR 1926.21(b)(6) and 1910.146 when applicable and the University's confined space policy. (Contact the EH&S General Safety Division at 362-6816 for the WashU Confined Space policy or access it at <http://www.ehs.wustl.edu/>).

B. Prior to performing work in areas with confined spaces, Contractor shall first notify Owner's Representative of the commencement of such work and shall provide Owner's Representative with a copy of the Contractor's confined space entry procedures.

C. Contractors must provide all equipment required for safe entry, including but not limited to rescue equipment.

9. Fall Protection

A. Contractors shall ensure all of its employees and subcontractors use fall protection devices as required by OSHA standards.

B. Reasonable protection shall be provided to protect personnel from accidental falls associated with floors, floor openings, platforms, scaffolds, guardrails, physical barriers, and elevated work locations. Standard guardrails must be provided for work locations 6 feet or more above the adjacent level per OSHA standard 29 CFR 1926.500 and fall protection generally provided for heights over 6 feet.

C. All employees working at unguarded locations above 6 feet in construction must be protected by properly wearing approved fall protection equipment including safety harnesses and life - lines as specified by OSHA regulations or other Applicable Laws. All employees required to wear approved fall protection devices must be properly trained as to the need for and purpose of the protection. Also, they must be instructed in the proper use of the equipment and shall demonstrate that they know, understand, and can use the fall protection devices properly.

D. Any employee operating/working in a lift (including scissors lifts) must be tied off at an approved manufactured tie off point. Employees may not tie off to side rails. If a lift does not have manufactured tie off points the lift must be removed from the project and replaced with a lift that does.

10. Blasting and Explosives

A. Before conducting any blasting operations notify Design & Construction (314) 362-8145 or EH&S (314) 362-6816 for work at the Medical School campus and Capital Projects (314) 935-5628 for blasting operations conducted at all other University locations. Additionally the Owner's Representative shall be notified prior to conducting any blasting operations.

B. Neither Contractor nor any of its Subcontractors shall store more than a maximum of one day's supply of explosives on University premises. All such stored explosives shall be secured by Contractor. Prior to storage of explosives, Contractor shall notify Owner's Representative of the storage location and the type and quantity of explosives.

**Emergency Phone Numbers**

For coordination of construction projects at the Medical School Campus the following points of contact should be used.

**Facilities Management Department (FMD) Phone Numbers:**

- Building Services..... 314-362-3100
- Design and Construction. .... 314-362-8145

**Environmental Health and Safety ..... 314-362-6816**

- Radiation Safety. .... 314-362-7436

**Emergency Phone Numbers:**

- WUSM Protective Services .....314-362-HELP (4357)

For coordination of construction projects at the Danforth Campus and all other campuses the following points of contact should be used.

**Facilities Planning & Management Phone Numbers:**

- Capital Projects and Records ..... 314-935-5628
- Maintenance Operations ..... 314-935-5544
- Utility Operations ..... 314-935-4319
- Custodial Services ..... 314-935-4472
- Card Access ..... 314-935-8322
- Grounds Maintenance ..... 314-935-4533

**Emergency Phone Numbers:**

- Washington University Police Dispatcher ..... 314-935-5555

**Environmental Health and Safety ..... 314-362-6816**

- Washington University Hazardous Materials Manager ..... 314-935-4650
- Washington University Environmental Compliance ..... 314-935-7864
- Washington University Safety ..... 314-935-5659