Phoenix Biomedical Campus

CONTRACTOR'S HANDBOOK

Planning & Facilities Department - 2022

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1. CONTRACTOR'S RESPONSIBILITY

Whenever the term "personnel" is used it shall mean employees, agents, contracted employees or subcontractors, vendors, and any other person providing services on behalf of the contractor or any subcontractor. The Contractor is responsible for ensuring that all of its personnel are familiar with the contents of this handbook.

Damages caused by the contract workers must be immediately brought to the attention of the University - PBC project manager or facilities manager.

2. PROJECT START-UP

A meeting will be held with the University - PBC project manager prior to start of construction. Items to be discussed include, but are not limited to the following:

a. Parking and Staging.

b. Schedules and impact on hospital departments: Care should be taken in the University - PBC environment for cleaning, noise, vibrations, shutdowns of systems, etc.

Appropriate facilities personnel shall be involved in any system changes and/or shutdowns. Shut down requests ***shall be submitted five (5) business days in advance, or a time agreed upon by the impacted entities, for routine shut downs; urgent requests will be processed in two (2) business days.***

c. Coordination for hazardous materials, abatement or safety procedures.

d. Plans for Risk Assessment shall include a Pre-Construction Risk Assessment, Documentation, and Monitoring as described in this manual.

e. Plan for containment of all dust, aerosol, fume, odors, fluids/liquid, and vapor producing construction procedures.

f. Documentation of all HVAC changes to include documentation of balancing, air exchanges, and pressure differential will be submitted to facilities manager upon completion of the project.

g. Appropriate training, if required, will be provided and documented for construction personnel.

h. Key University - PBC contact numbers, to include:

- Owner Controlled Insurance Program (OCIP) Administrator (if applicable)
- Project Manager
- Facilities Manager
- Environmental Control
- Safety Officer
- Compliance Officer
- Security
- Emergency Reporting

i. Other safety/disruption discussion

3. MEDICAL EMERGENCY

If an accident occurs on property, guidelines should be followed that have been established by the contracting company. If medical attention is required on site, call 9-1-1. The project manager and the Owner Controlled Insurance Program (OCIP) Administrator (if applicable) shall be notified as soon as practical, but in no case later than 24-hours after the accident.

4. FIRE SAFETY
Prior to each construction project or phase of work, the facilities manager, project manager, and manager of affected area(s), and the contractor will determine the frequency of fire drills to be conducted throughout the duration of the project. The contractor and his staff are expected to actively participate in the fire drill process. A series of questions will be asked each contractor regarding any vulnerability that the facility may be placed in due to the nature of the construction work. The University - PBC project manager or the facilities manager will answer any questions regarding the fire-safe systems within the facility. The Contractor is expected to train and keep records for all employees regarding their responsibility during fire situations or alarms.

FIRE AND SMOKE BARRIERS SHALL BE MAINTAINED AT ALL TIMES.
Implementation and compliance with University - PBC above ceiling work permit process shall be complied with. Failure to do so may result in removal from the facility.

NOTE: ANY IMPAIRMENTS TO THE FIRE DETECTION OR FIRE PROTECTION SYSTEMS MUST BE APPPROVED AND COORDINATED PRIOR TO THE ONSET OF WORK WITH THE PROJECT MANAGER

(See **Appendix A** - Contractors Responsibilities During Fire Situations or Alarms)

In the event of any other emergency, dial the provided Emergency Reporting number _____ at University – PBC P&O; or 9-1-1 for off-site) and state the emergency and the location.

5. INTERIM LIFE SAFETY MEASURES
The area under construction must be assessed for possible compromise to the building life safety system. Interim life safety measures will be developed with the contractor and project manager for all such items and a plan will be maintained by the contractor and project manager, including specific issues, plans during impairment, responsible individuals and schedule/times. Specific forms will be used for documentation purposes and identifying which measures will be implemented. The phases and frequency of this assessment will vary by the complexity of the project.

(See **Appendix B -** Interim Life Safety Measures Manual/Checklists)

6. HOT WORK PERMITS (CUTTING AND WELDING)
University - PBC facilities department shall provide authorization, and permitting for any cutting, welding or hot work prior to the onset of work. This will occur one time for work contained within the boundaries of the construction zone (not applicable to new construction unless it affects an existing building). For areas outside the construction zone (adjacent areas, hallways, etc.), application will be made for each phase of work.

If a permit is required, the permit must be applied for 2-business days in advance, be approved, and be posted at the work location. Extreme caution is to be used at all times during this type of work. Any deviation from permit requirements may be cause for immediate cessation of work at the contractor's expense.

Fire suppression equipment must be provided by the contractor where cutting/welding/hot work is conducted. Adjacent areas potentially affected by any cutting/welding/hot work must be protected by the contractor. Contractors shall provide their own fire suppression equipment. A fire watch for one hour shall be in effect after completion of the hot work, or as stated on the permit.

(See **Appendix C –** University - PBC Hot Work Burn Permit)

7. EVACUATION

In the event of a natural disaster or internal emergency that impacts the facility (e.g., monsoon, explosion, aircraft disaster, flood) it is the contractor's responsibility to collaborate with the University -PBC project manager and the department manager of the affected area; and identify the location where their personnel will go in the event of a disaster. The contractor shall follow all exit signs, evacuation plans and procedures to properly exit the facility.

8. SECURITY ISSUES

Facility keys and/or access cards will be issued at the discretion of the University - PBC facilities manager. Documentation will be kept on file for each key issued. Contractors who have been assigned keys must ensure that these keys are kept in their possession at all times and shall not allow reproduction. The University - PBC project manager/or facilities manager shall be notified of any lost or stolen keys.

9. USE OF SITE

a. Housekeeping: Each contractor/subcontractor is required to insure that all debris, flammable liquids, and combustible materials are removed from the job site on a daily basis (this includes roof areas). Plaster, cement, paint, oil, etc. is not allowed to be dumped in sanitary or storm drains while mixing or cleaning up. It is the responsibility of each contractor to ensure that all exit corridors, exit doors, firefighting equipment, fire alarm strobes, and fire alarm pull stations remain clear AT ALL TIMES. In addition, construction debris may not be placed in any University - PBC facilities trash receptacle, compactor or dumpster. The placement of contractor supplied dumpsters must be approved by University -PBC prior to delivery.

b. I.D. Badge: University - PBC ID badges are required for all contractors and or subcontractor while on University - PBC property.

c. Parking: Parking on-site at any University - PBC facility must be reserved for visitors and staff. Contractor and or subcontractors may only use those parking areas designated for contractor parking. At no time shall a vendor or contractor obstruct a handicapped parking space or park in a fire lane. Under no circumstances is there to be any impedance of the emergency vehicle access roadway, no matter how temporary, without specific prior coordination with the University - PBC project manager or facilities manager. Failure to comply with this parking policy could result in parking privileges being revoked.

d. Materials Delivery: The University - PBC project manager or facilities manager is to be notified prior to the delivery of any materials or supplies that will impact the on-site vehicular/pedestrian circulation or parking, or of any off-hours deliveries, to ensure proper coordination. Prior notification and permission is also required for use of the any loading dock. At no time shall fire rated doors or controlled access doors be blocked open.

e. Equipment and Material: Tools and equipment are not to be left unattended in a public corridor, public area, or staff area.

f. Working Hours: This will be determined on a case-by-case basis with the University - PBC project manager.

g. Smoking and other tobacco products: All University - PBC campuses are tobacco-free. There are no designated areas on University - PBC properties that are approved for smoking. Smoking and other uses of tobacco products are prohibited at all times, under all circumstances, by all persons, on all construction sites, in the interior, parking lots and on the roofs of all University - PBC facilities. Workers may only smoke in those areas designated by the University - PBC project manager and the facilities manager.

h. Grounds Protection: The Contractor/subcontractor will provide and maintain protection for all existing lawns, trees, curbs, gutters, hydrants, light standards, drive, walks, street signs and buildings not noted for removal. Damage will be repaired or the items replaced at Contractor’s cost.

i. Elevators: The University - PBC project manager and or the facilities manager will inform the contractors as to which elevators will be used to transport materials and personnel during the project/work.

j. Restroom Facilities: Restroom facilities are restricted to University - PBC staff and visitors only. It is the responsibility of the contractor to provide hand washing and restroom facilities for the construction project. On a case by case evaluation, University - PBC may allow use of a facility's restroom.

10. DRESS CODE/CONDUCT

University - PBC expects all companies, company employees, contract employees, and vendors who are working in any facility, building or property to present a professional image at all times. ***NON-COMPLIANCE WITH THE "*University - PBC DRESS CODE" *POLICY WILL REQUIRE IMMEDIATE REMOVAL FROM THE SITE****.* University - PBC Dress Code/Conduct policy must be followed at all times.

(See **Appendix D – University - PBC Dress Code/Conduct**)

11. LOCK-OUT/TAG-OUT (OSHA CFR 1910.147)

Any work involving "lockout tag out" procedures, shall be in accordance with the most stringent state or federal OSHA, or local Standards. This also includes closing and locking mechanical room doors and electrical panels.

NOTE: Electrical wiring must never be left uncovered or unprotected any time

12. HAZARD COMMUNICATION STANDARD

University - PBC policy is to comply with local, state and federal agency requirements. We require contractors who work at our facilities to comply as well. All chemicals used by contractors must be labeled with the appropriate warning signs in accordance with OSHA standards. If the product is transferred to another container, the new container must also be appropriately labeled.

13. MATERIAL **SAFETY DATA SHEETS (SDS)**

The contractor shall maintain a full and up-to-date "chemical inventory list" of all chemical products. In addition, a copy of each product's Safety Data Sheets (SDS) shall be readily available in a predetermined location on the project site. All SDS information shall be reviewed by University - PBC Project Manager prior to commencement of a project. University - PBC restricts the use of hazardous materials. SDS information will remain at the site and accessible for use.

University - PBC employees who may be assisting/overseeing the project shall have access to the SDS. Contract workers must also be trained in the proper usage of all chemicals used on the project. Their training must include but not limited to and be in accordance with OSHA Standards:

a. Where the hazardous chemical is to be used in the facility,
b. Where the SDS book is kept,
c. Methods used to detect the presence or release of the hazardous substance,
d. Physical health hazards associated with each hazardous chemical,
e. Use and location of personal protective wear,
f. Written spill and clean-up procedures,
g. Proper storage and location of Hazardous Materials, and
h. Proper storage and disposal of hazardous wastes.

A COPY OF THESE TRAINING PROCEDURES MUST BE GIVEN TO THE University - PBC PROJECT MANAGER PRIOR TO THE COMMENCEMENT OF ANY PROJECT WHERE HAZARDOUS CHEMICALS ARE USED.

14. HAZARDOUS WASTE DISPOSAL

All hazardous waste must be disposed of in accordance with Federal, State, and Local laws. Under no circumstances are hazardous wastes to be left on University - PBC property. If it is known that there will be hazardous waste during the course of the project, the University - PBC project manager or the facility manager must be notified prior to the commencement of the project. The cost of hazardous waste removal and disposal is the responsibility of the contractor with arrangements made in advance with the University - PBC project manager. The haulers used by the contractor and the disposal site must be preapproved by the University - PBC project manager.

15. HEALTH SCREENING FOR CONSTRUCTION STAFF

[This section omitted]

16. SAFETY AND HEALTH INSPECTIONS

University - PBC is involved in ongoing safety surveillance. The construction project may be monitored by the OCIP Administrator (if applicable), University - PBC facilities manager, project manager, plus Risk Management. If any asbestos, mold, lead, etc. are observed by contract workers, the University -PBC project manager and facilities manager must be notified immediately.

17. ENVIRONMENTAL CONTROL

Tenant improvements construction, demolition and remodeling can be a risk factor for certain staff, especially those who are immunosuppressed. Activities that disturb dust may be associated with transmission of aspergillus, a fungus found in ceiling and wall spaces where dust has accumulated when dispersed fungal spores can be inhaled by a susceptible staff member and cause disease.

(See **Appendix F –** Environmental Control and the Construction Worker)

An Environmental Control Risk Assessment (ECRA), specific to construction work, will assist in identifying and reducing staff exposure to airborne particulates or moisture from construction, renovation or routine maintenance. It also provides a means to implement and monitor safety measures to prevent exposure to common environmental contaminants during all phases of construction.

(See **Appendix G – ECRA Policy**)

Planning for new construction or renovation must be reviewed by University - PBC facilities department as planning commences for a project in or adjacent to staff areas. Consultation will be obtained as needed from University - PBC facilities manager, the project manager. The University - PBC project manager will be responsible for monitoring construction and renovation areas for compliance with the University - PBC ECRA policy and adherence to the applicable assessment/permit procedures. Any breaches in Environmental Control practices will be reported to the University - PBC project manager who will notify the facilities department. University - PBC will identify any additional educational needs for the construction worker and/or unit staff. The University - PBC project manager will be informed of any special educational needs and will provide assistance as needed.

HVAC, Water and Sewage Handling Precautions

Unplanned interruptions of the HVAC, water supply and sewage spills are situations which require immediate recovery and remediation measures to assure the health and safety of visitors and staff. Should any planned or unplanned interruption occur the contractor shall follow University - PBC facilities department directions for restoration of the service.

SHOULD A SEWAGE SPILL OR RELEASE OCCUR THE FLOW SHALL BE STOPPED AS QUICKLY AS POSSIBLE! Notify the University - PBC project manager immediately. If unavailable contact facilities department and/or the project manager.

18. SAFETY

All work on University - PBC projects shall be completed in full compliance with the Contractor's Safety Program, Federal Laws, State Laws, Local Laws, OSHA and EPA requirements. The attached Minimum Safety Guidelines shall be followed.

(See **Appendix H Minimum Safety Guidelines**)

19. ABOVE CEILING WORK

All work that is done in any ceiling must have an Above Ceiling Work Permit filled out, approved, and signed by a University - PBC facilities manager before the work is to begin.

(see **Appendix I – Above Ceiling Work Permit**)

Exceptions:

a. Work that is done within the confines of an established construction zone.

Note: Even if ceiling work does not include any wall penetrations, an above ceiling work permit must be filled out, approved, and posted. Above ceiling observations per ECRA definitions do not constitute "work" and consequently are not bound by these guidelines.

REQUIREMENTS:

a. The top two sections of the above ceiling permit are to be filled out by the contractor and then approved by a University - PBC facilities manager.

b. The original permit remains with the University - PBC facilities department and a copy posted at the site of the work at all times.

c. Flag **all wall penetrations** with a piece of caution tape hanging down approximately six inches from the grid or ceiling access panel (no more than six inches). University - PBC facility staff will remove this flag following the inspection.

d. Once work is completed, meet with a University - PBC facilities department manager for a final inspection and removal of penetration flags.

e. Once the post work section of the permit is completed and signed, retain a copy of the permit for project files. The original will be retained by the University - PBC facilities department.

20. CONFINED SPACES

a. Contractor shall provide all personnel and equipment necessary to comply with confined space entry procedures established in Code of Federal Regulations, Title 29, Part 1910.146 (Permit Required Confined Spaces). Contractor shall treat all confined spaces encountered on University - PBC properties as permit-required confined spaces unless Contractor's pre-entry procedures indicate otherwise.

Contractor shall provide appropriate air monitoring equipment, employee training, permit forms, rescue procedures, personnel, and other means necessary to safely and independently enter confined spaces at University - PBC facilities.

22. WATER INTRUSION FROM FIRE SPRINKLERS AND DOMESTIC WATER EVENTS

Over the years many businesses have experienced losses due to water intrusion from fire sprinklers and domestic water systems. Historically, losses have occurred from fire sprinklers or domestic water systems being damaged during construction work, maintenance work, and cleaning practices. These losses are most damaging to property, and equipment, due to the volume of water and are equally damaging and costly to administrative, laboratory, and warehouse spaces that are affected.

The contractor will be proactive in protecting and responding to water intrusion events. Prior to beginning work and throughout the project, the contractor will conduct a toolbox safety talk and complete a checklist in regards to water intrusion from fire sprinklers and domestic water events.

(See **Appendix K Water Intrusion from Fire Sprinklers and Domestic Water Events Toolbox and Checklist**)

23. IMPACT NOTICES

If construction activity impacts the facility in any of the following areas, contractor must notify the University - PBC project manager and University - PBC facilities manager prior to seven days or 84 hours of the impact start time:

 Domestic Water,

 Chilled Water,

 Fire Sprinkler,

 AH/RTU,

 Hot Water,

 Electrical,

 Fire Alarm, or

 Any other activity which will impact staff or visitors.

(See **Appendix L Impact Notice Form**)

APPENDIX A.

CONTRACTOR RESPONSIBILITIES DURING FIRE SITUATIONS OR ALARMS

While working at University - PBC facilities you share the "Higher Level of Responsibility" required of all University - PBC employees. That basic philosophy requires that we protect the staff who work for us from fire and the products of combustion. This is accomplished by:

A. training staff to fight fires if appropriate,
B. establishing roles and communications,
C. having knowledge of the fire systems involving reporting, detection, extinguishment and compartmentalization,
D. understanding how to maintain and monitor for a fire safe environment during construction operations.

All of the above points should be established at construction meetings prior to project start-up, and monitored during operation. The contractor shall maintain a copy of the Contractor's Handbook and train all staff on the procedures and required documentation. Sign-in documentation is required with copies to the University - PBC project manager.

FIRE FIGHTING

A. Contractor shall know University - PBC fire rescue acronyms

R.A.C.E.

RESCUE endangered persons.
ALARM by activating the closest pull station
CONTAIN the **fire** and smoke by closing all doors and windows **monitor** all temporary smoke barriers. (i.e. doors)
EXTINGUISH the fire, if this can be done safely through the use of construction area fire extinguishers.

P.A.S.S

PULL the pin on the extinguisher
AIM at the base of the fire
SQUEEZE the extinguisher handle
SWEEP the nozzle back and forth at the base of the fire.

B. The contractor shall provide serviceable fire extinguishers, appropriate to the hazards in the area, and train workers how to properly use them. Contractor fire extinguishers must be inspected and documented monthly. Contractor fire extinguishers will be a minimum required size of 10lb and maintained at each site no more than 75 ft. between extinguishers.

C. Evacuation Routes and procedures will be developed for each location in collaboration with the University - PBC project manager and/or University - PBC facility manager.

D. ROLES AND COMMUNICATION

Away from the point of fire origin: maintain location and listen for overhead page or radio instructions. Upon hearing an alarm, all construction work shall be stopped and workers be prepared to follow instructions. If the fire is in the construction area, immediately stop work and follow established emergency procedures.

FIRE AT CONSTRUCTION SITE:
Immediate Response: **R.A.C.E.**

1. **Direct pedestrian traffic** away from construction site.
2. **Advise fire department** on site conditions and materials stored within site
   Assist as requested.

E. The contractor shall know the fire system employed and understand how it works.

FIRE SYSTEM KNOWLEDGE

1. **Understand** fire/smoke compartment layout for smoke control
2. **Know** the location of all fire-fighting equipment and alarms
3. **Access** each area of construction for Type(s) of alarm detection and extinguishing systems.
4. **Be Familiar** with evacuation routes and plans.

Shut-down or modification of any fire system shall always be communicated to the University - PBC project or facilities manager before proceeding.

APPENDIX B.
Interim Life Safety Measures Manual/Checklists

POLICY and PROCEDURE
TITLE: Safety Manual: Fire Safety Management Plan- Interim Life Safety Measures (ILSM)

I. Purpose/Expected Outcome:
A. To provide University - PBC facilities a project safety plan with the intent of providing, visitors, employees, and construction workers a safe environment during all construction, renovation, demolition and/or routine maintenance activities or activities that compromise life safety systems.

II. Definitions:
A. Facility management staff - for the purposes of this policy: the facility management staff consists of members of development and construction, safety, facilities services, technology management and information technology.

B. Fire Watch- A fire watch is implemented to ensure the fire-safety of a building or area in the event of any act, e.g., hot work, or situation instigating an increased risk to persons or property.

1. A fire watch is immediately required whenever a fire alarm or suppression system (i.e. sprinkler system) is impaired. The ***authority having Jurisdiction*** (AHJ) must be notified for impairments greater than four hours (within a 24-hour period) in an occupied building (Reference Appendix III for specific information and instructions).
2. Fire Watch during hot work- requires a dedicated individual with a fire extinguisher and no other duties but fire watch, during and one hour after, hot work is completed. The AHJ does not need to be notified for hot work alone- only for impairments (to fire alarm or suppression) that last greater than 4 hours within a 24-hour period.

C. Interim Life Safety Assessment (ILSA) (Appendix II) – Risk Assessment designed to address situations when Life Safety Code (LSC) deficiencies cannot be met. Mitigating measures, or ILSM, must be implemented to temporarily compensate for risks & hazards posed by:

1. Construction activities (in or adjacent to all construction areas), renovation, demolition and/or routine maintenance activities.
2. Existing life safety code deficiencies (i.e. blocked exits, dead end corridors).
    a. Identified life safety deficiencies shall be tracked (through facility-level work order process);
    b. Identified life safety deficiencies, that cannot be corrected within 45 days, shall have a plan for improvement (PFI) created.

D. Pre-Construction Risk Assessment (PCRA) (Appendix IV) - a risk assessment that provides the strategic and proactive design to mitigate environmental sources related to industrial hygiene principles (noise, vibration, etc.) through architectural design as well as the specific needs of the population served by the facility.

III. Policy:
A. University - PBC employees, contractors and subcontractors will utilize this safety plan as a minimum guideline for all construction, renovation, demolition and routine maintenance activities or activities that compromise life safety systems.

B. ILSM apply to all personnel, including construction workers, and are implemented upon project development, including changes and continuously enforced through project completion.

C. University - PBC management responsibilities:

1. Construction project manager and/or facility-level designee, is responsible for the overall safety of the project and day to day operations.
2. Construction project manager and/or facility-level designee, is responsible for coordinating the facility management staff.
3. Facilities management, and/or their designee, must complete an interim life safety pre-assessment form *whenever* any life safety feature of a building is compromised. Based on the results of the ILSM pre-assessment the person completing the assessment may be required to implement appropriate interim life safety measure until the hazard is removed. (*Reference Appendix II*)
4. The facility management staff must complete a pre-construction risk assessment (PCRA) *(Reference Appendix IV and V*) for each project to assess the potential impact of construction (renovation, remodeling, demolition and/or maintenance) upon the facilities operations.
    a. If the project activities are to be performed by an outside contractor, then they will also be included in the PCRA process.
    b. Each project will be carefully reviewed, utilizing the criteria, to determine if there are unique problems requiring special consideration during construction. Plans/processes, including appropriate emergency response procedures, will be developed and implemented to minimize the impact of the project on affected staff care and business operations.
    c. The risk assessment process will be repeated, as required, to assure effective management of the issues listed throughout the life of each project, from the design phase up to and including the time of completion (occupancy & operation).
    d. The risk assessment documentation, and the plans/processes developed to manage and/or mitigate the impact of construction will be maintained in facilities services or facility-level designee.

D. Procedure/Interventions:

A. **Safety Requirements: Pre-Construction or Project Phase**

1. Complete a pre-construction assessment for all projects prior to the start of any work. (**FACILITY MANAGEMENT**) *(Reference Appendix IV and V and Policy Statement B.4.)*
2. Determine the appropriate safety measures that must be put in place for the construction/maintenance project based on the results of the pre-construction assessment.
3. Ensure life safety deficiencies are documented as defined (Reference C. *Definitions*)
4. Submit a written safety plan to the facility management team and appropriate representatives, before any construction begins including: (**CONTRACTOR**).
    a. Material Safety Data Sheets (SDS- safety data sheet) for all materials and products used during the project;
    b. Smoke/dust barriers;
    c. Directional signage;
    d. Fencing;
    e. Traffic flow;
    f. Identification of project manager and facility manager
    g. Procedure for reporting weekly project inspections.

5. Provide all contractors and subcontractors with the following information: (**CONSTRUCTION PROJECT MANAGER/FACILITY-LEVEL DESIGNEE**)
    a. Facilities emergency numbers;
    b. Fire alarm pull boxes;
    c. Fire extinguisher locations;
    d. Evacuation routes from the construction site;
    e. Supply emergency contact phone numbers to the facility management staff. (**CONTRACTOR**)
    f. Notify the Fire Department (or other appropriate emergency response group), whenever a fire watch is initiated for fire alarm or suppression system impairment greater than 4 hours (within a 24-hour period) within an occupied building. **(FACILITIES MANAGEMENT**) (Reference Appendix III for specific information and instructions).

B. **Safety Requirements: Project Phase**

1. Require all construction projects to have weekly safety briefings with all personnel, including subcontractor employees, who are working on the job site. (**CONTRACTOR**)
2. Record safety briefing to meet minimum safety education requirements of the facility. Retain all safety documents in the construction file.
3. Submit to facility management staff, all Interim life safety equivalencies.
4. Where applicable, submit proposed changes of the Interim life safety equivalencies to the local authority having jurisdiction for approval and a copy of the approved plan to the facilities department office or their designee. (**FACILITY MANAGEMENT**)
5. Conduct an additional fire drill per shift per quarter in the affected area, when interim life safety measures have been implemented and approved by the local authority having jurisdiction.
(Reference Appendix II) **(FACILITIES/MANAGER/DESIGNEE**)
6. Provide for safety measures during project activity (*Reference Appendix I for a complete list of safety measures*) (**CONTRACTOR/FACILITY MANAGEMENT**)
    a. Keep all exits and exiting paths free and unobstructed.
    b. Post directional signage in place when alternate exit routes are being used.
    c. Manage debris at least daily.
    d. Document daily exit checks.
7. Coordinate with the project manager, facility management, and the appropriate department director/manager any directional changes or alternate exit routing at least 48 hours in advance of any changes.
8. Communicate to and educate staff about exiting changes to the appropriate department personnel and document this communication and education. (**DEPARTMENT DIRECTOR/MANAGER/DESIGNEE**)
9. Maintain (not impair) all fire alarm, detection and suppression systems. (**CONTRACTOR**)
    a. Coordinate with facilities management to provide a temporary, equivalent system when a system is impaired.
    b. Coordinate with facilities management when a fire watch (reference Definitions) is necessary.
    c. Coordinate with facilities management during **hot work processes** (Reference Appendix III).
        i. The individual assigned to fire watch will have no other duties other than fire watch.

(i) Document fire watch during hourly rounding of the affected areas and provide documentation to facilities management or facility-level designee;
(ii) Check for and ensure unobstructed egress paths in the affected areas;
(iii) Dial the facility emergency number or 911 in the event of a fire or smoke and implement fire procedures.

10. Maintain temporary construction partitions that are smoke tight and constructed of noncombustible materials.
11. Maintain identifiable boundaries between all construction zones and the general public, staff, and/or employee areas.
12. Notify the construction project manager and facility management before any welding/soldering takes place.
    a. Complete and submit to facility management a welding/soldering permit. (**CONTRACTOR/WELDER**) *(Reference Appendix III*)
13. Notify the construction project manager and facility management before any confined spaces are entered. A confined space permit must be completed prior to entry of confined spaces.
14. Limit storage of construction materials and equipment to specified locations within the job site (no items are authorized to be stored in any stairwells or electrical/air handling/cleaning closet). (**CONTRACTOR**)
15. Handling of Debris:
    a. Keep all debris (especially combustible materials) to a minimum and remove **daily.**
    b. Prohibit contractors from placing construction debris in any University - PBC dumpster.
16. Conduct unannounced inspections. (**FACILITIES MANAGEMENT, PROJECT MANAGER**)
    a. Retain a copy of the report as part of the construction project file.
    b. Complete the Construction Safety Inspection Checklist (*Reference Appendix I*) and retain as a part of the construction project file.
    c. Identify and report any hazardous or potentially unsafe *situation immediately to c*onstruction project manager and facilities manager.
17. Prohibit smoking in or adjacent to any unapproved areas. (**CONTRACTOR**)
18. Give a minimum of **5 business days-notice**, or a time agreed upon by the impacted entities, *prior* to any utility system shut down to facility management and the construction project manager.
19. Schedule and coordinate all utility system work in order to lessen the impact of the affected department. **(FACILITIES MANAGEMENT)**
20. Wear appropriate hard hat headgear, eye protection and steel toed shoes when deemed appropriate within the construction area. (**ALL PERSONNEL**)
21. Maintain required fire extinguishing equipment in proper working order. (**CONTRACTOR**)

C. **Safety Requirements: Post Construction or Post Project Phase**

1. Conduct a final construction safety walk through upon completion of the project. (**FACILITY MANAGEMENT STAFF**)
2. Verify that removal of all hazardous materials/wastes from University - PBC property was performed by the applicable contractor.
3. Perform final electrical system inspection of all receptacles within the construction area to ensure all grounding systems are functioning as required. (**CONTRACTOR**)

V. Procedural Documentation:

A. Document:

1. Safety Plan (for construction project) (contractor)
2. Safety briefing information (contractor)
3. Employee education (contractor)
4. Interim life safety assessment and checklist (*Appendix II*) (contractor and facility management staff)
5. Construction safety inspections (*Appendix I*) (facility manager)
6. Welding permit and fire watch (*Appendix III*) (construction PM/facilities/designee)
7. Risk assessment *(Appendix IV)* (facility management staff)
8. Facility management staff contact information *(Appendix V)* (facility management staff)
9. Daily exit checks if determined necessary from the completion of the ILSM assessment (Appendix II)
10. Employee education specific to ILSM deficiencies such as exit changes (dept. leader)

VI. Additional Information:

A. Disruption notices, at the facility or plant-level, are sent regularly, to notify of any system disruptions that may impact normal operations.

B. Contractor participation may include training of construction workers, supplying specialized equipment to create and maintain safe environmental conditions, monitoring construction staff behavior, enforcing safe work practices and maintaining diligent assurance of all necessary records and documentation.

C. This policy encompasses the minimum project expectations.

D. All University - PBC employees are expected to follow these minimum guidelines in accordance with Policy Statement A of this policy.

VII. References:

VIII. National Fire Protection Association (NFPA) Life Safety Code (LSC) 101 (2000) at http://www.nfpa.org/Codes/index.asp

IX. National Fire Protection Association (NFPA) 241: Standard for Safeguarding Construction, Alteration, and Demolition (2009)

X. Occupational Health and Safety Code of Federal Regulations (CFR) 1910.157(g) at http://www.osha.gov

VIII. Keywords and Keyword Phrases:

A. Construction
B. Egress
C. Environmental Health and Safety
D. Safety Manual
E. Interim Life Safety Measures
F. General Safety Management
G. Routine Maintenance
H. Construction Projects
I. Contractor
J. Risk Assessment

IX. SUB-APPENDIX List:

A. *Appendix I* - Project Safety Inspection Checklist
B. *Appendix II* - Interim Life Safety Assessment

C. *Appendix III* - Welding Permit and Fire Watch
D. *Appendix IV* - Pre-Construction Risk Assessment
E. *Appendix V* - Facility Management Team Contact Information

SUB-APPENDIX I - PROJECT SAFETY INSPECTION CHECKLIST

Project: _____Date: _____
Location: _____ Time: _____
1. Is there additional fire extinguishing equipment available/accessible?

YES	NO	SCORE	CORRECTIVE ACTION

2. Fire alarms, detection and suppression systems are in working order?

YES	NO	SCORE	CORRECTIVE ACTION

3. Are exit signs visible and lit?

YES	NO	SCORE	CORRECTIVE ACTION

4. All fire doors, stairwells and exits are unobstructed?

YES	NO	SCORE	CORRECTIVE ACTION

5. Escape routes/exits from the construction area are clear and unobstructed?

YES	NO	SCORE	CORRECTIVE ACTION

6. Are mats at entrance and exits? What type?

YES	NO	SCORE	CORRECTIVE ACTION

7. Are there barriers in place? Properly sealed? What type?

YES	NO	SCORE	CORRECTIVE ACTION

8. Is the contractor keeping flammables and combustibles to the lowest feasible level and removed at least DAILY?

YES	NO	SCORE	CORRECTIVE ACTION

9. Is there “hot work” being performed?

YES	NO	SCORE	CORRECTIVE ACTION

If yes -Are compressed gas cylinders properly restrained?

YES	NO	SCORE	CORRECTIVE ACTION

10. Are chemical containers properly labeled and stored?

YES	NO	SCORE	CORRECTIVE ACTION

11. Are storage areas neat and orderly?

YES	NO	SCORE	CORRECTIVE ACTION

12. Is the construction/project zone properly restricted and does it have proper signage?

YES	NO	SCORE	CORRECTIVE ACTION

13. Are randomly selected construction worker's familiar with emergency number, codes and extinguisher locations?

YES	NO	SCORE	CORRECTIVE ACTION

14. Are construction workers wearing PPE? Properly?

YES	NO	SCORE	CORRECTIVE ACTION

15. No smoking in or near construction areas enforced?

YES	NO	SCORE	CORRECTIVE ACTION

A score of 1= noncompliance, 2= partial compliance, 3= full compliance
All must have a noted corrective action;
Benchmark – 85%
Total Score: _____
Additional Comments:

Reviewer: _____
Copy to Facilities Office

SUB APPENDIX II – Interim Life Safety Measures Assessment (ILSM/ILSA)

POST THIS COMPLETED ASSESSMENT WHEN ILSM IS REQUIRED

Project Title/Location:

Project Start date:

Projected End Date:

Revision date:

Contractor:

YES responses require an assessment and action plan!

 Does the project affect any EXITING from the area?

NO	YES	ACTION PLAN

 Provide free/unobstructed exits at all times; COMMUNICATE any changes to the local AHJ

 Provide staff with additional information/communication when/where alternative exits are designated;

 Maintain escape routes for construction workers at all times in buildings/areas under construction; Facilities or designee will document on work order or other form and INSPECT EXITS DAILY

Assessment/Action Plan:

□ Does the project cover/silence/disable any aspect of the fire alarm/detection system?

NO	YES	ACTION PLAN

□ Provide a temporary but equivalent system, when any fire system is impaired

□ Inspect/test and document, any temporary systems, monthly, on work order or other form

□ Implement a fire watch (Appendix III) in an occupied building, whenever an approved fire alarm/automatic sprinkler system is out of service; NOTIFY the local AHJ (or other emergency response group) and facility-level leadership, for fire watch greater than 4 hours

Assessment/Action Plan:

□ Does the project require the use of temporary construction partitions?

NO	YES	ACTION PLAN

□ Ensure partitions are smoke-tight, built of non-combustible/limited combustible materials that will not contribute to the development or spread of fire

Assessment/Action Plan:

□ Will storage, house-keeping, debris-removal practices increase the buildings flammable and combustible fire load?

NO	YES	ACTION PLAN

□ Reduce debris to the lowest feasible level

Assessment/Action Plan:

□ Will compartmentalization/structural features be impaired by the project?

NO	YES	ACTION PLAN

□ NOTIFY/TRAIN staff to compensate for impaired structural/compartmentalization features of fire safety; DOCUMENT this training

Assessment/Action Plan:

□ Will access for fire/police/emergency services be affected by this project?

NO	YES	ACTION PLAN

□ NOTIFY the appropriate agencies as needed.

Assessment/Action Plan:

□ Provide additional fire-fighting equipment and education on proper use.

NO	YES	ACTION PLAN

□ May be contractor supplied/monitored by project manager

Assessment/Action Plan:

□ Conduct additional fire drills (one/shift/qtr.) when needed.

NO	YES	ACTION PLAN

□ The Facility Management Team (refer to Policy Definitions) will determine/document if additional drills are needed

Assessment/Action Plan:

□ Increase surveillance of buildings/grounds/equipment, pay special attention to excavations, filed offices, construction hazards and these ILSM.

NO	YES	ACTION PLAN

This may be monitored/documented by the project manager or University - PBC designee; refer to Appendix 1 for announced inspections

Assessment/Action Plan:

□ Promote company-wide safety education programs, awareness of fire-safety building features, construction hazards, and these ILSM.

NO	YES	ACTION PLAN

□ This is accomplished through email (E-News) notifications, internal news-letters, meetings, leader-staff meetings, etc.

Assessment/Action Plan:

□ SMOKING/ANY TOBACCO products are strictly PROHIBITED.

The project manager will monitor compliance with this University - PBC policy.

ADDITIONAL INFORMATION:

Submitted by:

Approved by:

SUB-APPENDIX III - Welding or Cutting Permit

(THIS PERMIT IS GOOD ONLY FOR TIME, PLACE AND JOB LISTED BELOW)

DEPARTMENT _____WORK AREA_____DATE_____/_____/_____
WORK TO BE DONE

_____

_____

CHECK SPARK PRODUCING EQUIPMENT TO BE USED:

GAS TORCH [ ] WELDING [ ] GRINDER [ ] CHOP SAW [ ] OTHER [ ]

_____

NECESSARY PRECAUTIONS:

	YES	NO	N/A
1 SPRINKLERS IN SERVICE?	[ ]	[ ]	[ ]
2 HAVE ALL CONNECTIONS BEEN BLANKED OFF?	[ ]	[ ]	[ ]
3 EQUIPMENT PURGED OF FLAMMABLES?	[ ]	[ ]	[ ]
4 FLAMMABLE LIQUIDS REMOVED?	[ ]	[ ]	[ ]
5 FLOOR SWEPT CLEAN OF COMBUSTIBLES?	[ ]	[ ]	[ ]
6 OTHER COMBUSTIBLES IF NOT REMOVED, COVERED WITH A FIRE-RESISTANT TARPAULIN?	[ ]	[ ]	[ ]
7 EQUIPMENT IN GOOD CONDTION?	[ ]	[ ]	[ ]
8 ENERGY SOURCES AND MOVING MACHINERY LOCKED OUT?	[ ]	[ ]	[ ]
9 ARE VENTILATION, SEWER, WALL, CEILING OPENINGS, ETC. PROTECTED FROM SPARKS?	[ ]	[ ]	[ ]
10 FIRE WATCH PRESENT?	[ ]	[ ]	[ ]
11 ATMOSPHERIC TESTING FOR FLAMMABLE GAS/VAPORS OR COMBUSTIBLE DUST CONDUCTED?	[ ]	[ ]	[ ]
12 IS A BREAKING INTO PIPING/EQUIPMENT PERMIT REQUIRED?	[ ]	[ ]	[ ]
13 IS A CONFINED SPACE ENTRY PERMIT REQUIRED?	[ ]	[ ]	[ ]
14 SMOKE DETECTION DISABLED FOR DURATION OF WORK?	[ ]	[ ]	[ ]
15 FULLY CHARGED FIRE EXTINGUISHER PROVIDED?	[ ]	[ ]	[ ]

I HAVE READ AND UNDERSTAND ALL PRECAUTIONS LISTED ABOVE AND AGREE TO OPERATE WITH THESE LIMITATIONS.

HOT WORK PERMIT SUBMITTED BY: _____
TIME_____AM/PM NAME/TITLE

HOT WORK PERMIT APPROVED BY: _____
TIME_____AM/PM NAME/TITLE

THIS PERMIT TO BE POSTED AT WORK LOCATION
A fire watch consisting of at least one person furnished by the contractor, with no other assigned duties, shall be posted to stand by and observe areas for any potential hazards at all times while welding or cutting is being done and fire watcher is trained in use of this equipment, sounding alarm and emergency procedures. (Reference Appendix III of the ILSM Policy)

All extinguishers are to be furnished by the contractor. Initials _____ _____

All welders must have all appropriate certifications within the last twelve months. Initials _____ _____

***Applicable items must be answered "yes" before permit is approved.**

I hereby agree to perform the necessary welding and cutting operations as outlined in this permit.

_____ _____
Contractor's Signature Date

A University - PBC P&O representative has inspected the work area involved, and all requirements outlined have been explained.

_____ _____
Approved by Date

FIRE WATCH LOG

FACILITY NAME		**LOCATION**	
DATE OF ACTIVATION		**TIME OF ACTIVATION**	
DATE OF DE-ACTIVATION		**TIME OF DE-ACTIVATION**	
PROJECT MANAGER		**PROJECT MANAGER PHONE #**	
DISRUPTION NUMBER		**FIRE DEPT. NOTIFIED ON AND BY**	

REASON FOR FIRE WATCH:

Responsibilities: The Fire Watch personnel shall conduct **hourly** rounds by walking throughout the affected area, looking for evidence of smoke, fire or any abnormal conditions. Dial the emergency number and implement **"Fire"** protocol, if evidence of smoke or fire is identified. NOTIFY Fire Department (or AHJ) for any fire watch greater than 4 hours (within a 24-hour period).

Devices Disabled:

_____Time:_____

Date: _____

Devices Enabled:

_____Time:_____

Date: _____

Verification Table

12A-1A		**6A-7A**		**12P-1P**		**6P-7P**	
1A-2A		**7A-8A**		**1P-2P**		**7P-8P**	
2A-3A		**8A-9A**		**2P-3P**		**8P-9P**	
3A-4A		**9A-10A**		**3P-4P**		**9P-10P**	
4A-5A		**10A-11A**		**4P-5P**		**10P-11P**	
5A-6A		**11A-12P**		**5P-6P**		**11P-12A**	

Initials are required for each hour of watch completed.

Problems Encountered/Status of Watch:

SUB-APPENDIX -IV – Pre-construction Risk Assessment Survey

STEP 1 – IDENTIFY THE HAZARD

CATEGORIES	***FACTORS***	***RISK LEVEL (1-3)***	***ACTION/EVALUATION***
1. Noise or Vibration	Impact, Duration		
2. Air Quality/Dust	Cutting, Grinding, Sanding, odor, etc.		
3. Survey for ACBM	Exposure to and/or disruption (friability) of Asbestos Containing Building Materials		
4. Hazardous Materials	Volatile / Flammable / Toxic/Lead-base paint (pre-1978 construction)		
5. Disruption of Utilities	Planned shutdowns, Construction near utility system supplies, medical gas, air test & balance, PA audible in area?		
6. Life Safety Impact	ILSM Issues (If Life Safety is compromised, then appropriate ILSM measures are implemented), fire watch, fire alarm covers		
7. Above ceiling	Inspection needed		
8. Water Intrusion Potential	Roof work, excavation, etc.		
9. Hot Work Permit	Risk of fire due to operations involving open flame or high heat.		
10. Confined Space Entry	Employee/contractor entry into permit required confined spaces.		
11. Emergency Services	Fire Dept., Ambulance access, etc.		
12. Security	Site security, access control		

13.Additional Training RQD.	Special training for employees/contractor. Education, Communication Plan?		
14.Other			

*** PCRA Risk Levels: 1 = No Impact / No Risk, 2 = Low Impact, 3 = Significant Impact**

(If a rating of 3 is given, Information in Action column must be completed).

SUB-APPENDIX V – FACILITY MANAGEMENT CONTACT INFORMATION

Project:_____ **Contractor:** _____

Project Start Date: _____**24 Hour Contact #:** _____

Staff Member	Name	Telephone	Date	Signature
Facilities Manager				
Project Manager				
Facilities Tech.				
Security				
Dept. Manager				
Contractor				
Environmental/Janitorial				
Other				

APPENDIX C.

Hot Work/Burn Permit

(THIS PERMIT IS GOOD ONLY FOR TIME, PLACE AND JOB LISTED BELOW)

DEPARTMENT _____WORK AREA_____

START DATE___/___/___ END DATE __/__/_____

WORK TO BE DONE

_____

_____

CHECK SPARK PRODUCING EQUIPMENT TO BE USED:

GAS TORCH [ ] WELDING [ ] GRINDER [ ] CHOP SAW [ ]

OTHER [ ] (LIST) _____

NECESSARY PRECAUTIONS:

	YES	NO	N/A
1 SPRINKLERS IN SERVICE?	[ ]	[ ]	[ ]
2 HAVE ALL CONNECTIONS BEEN BLANKED OFF?	[ ]	[ ]	[ ]
3 EQUIPMENT PURGED OF FLAMMABLES?	[ ]	[ ]	[ ]
4 FLAMMABLE LIQUIDS REMOVED?	[ ]	[ ]	[ ]
5 FLOOR SWEPT CLEAN OF COMBUSTIBLES?	[ ]	[ ]	[ ]
6 OTHER COMBUSTIBLES IF NOT REMOVED, COVERED WITH A FIRE-RESISTANT TARPAULIN?	[ ]	[ ]	[ ]
7 EQUIPMENT IN GOOD CONDTION?	[ ]	[ ]	[ ]
8 ENERGY SOURCES AND MOVING MACHINERY LOCKED OUT?	[ ]	[ ]	[ ]
9 ARE VENTILATION, SEWER, WALL, CEILING OPENINGS, ETC. PROTECTED FROM SPARKS?	[ ]	[ ]	[ ]

10 FIRE WATCH PRESENT?	[ ]	[ ]	[ ]
11 ATMOSPHERIC TESTING FOR FLAMMABLE GAS/VAPORS OR COMBUSTIBLE DUST CONDUCTED?	[ ]	[ ]	[ ]
12 IS A BREAKING INTO PIPING/EQUIPMENT PERMIT REQUIRED?	[ ]	[ ]	[ ]
13 IS A CONFINED SPACE ENTRY PERMIT REQUIRED?	[ ]	[ ]	[ ]
14 SMOKE DETECTION DISABLED FOR DURATION OF WORK?	[ ]	[ ]	[ ]
15 FULLY CHARGED FIRE EXTINGUISHER PROVIDED?	[ ]	[ ]	[ ]
16 IS ABOVE CEILING WORK PERMIT REQUIRED?	[ ]	[ ]	[ ]

I HAVE READ AND UNDERSTAND ALL PRECAUTIONS LISTED ABOVE AND AGREE TO OPERATE WITH THESE LIMITATIONS.

HOT WORK PERMIT SUBMITTED BY:_____ TIME_____AM/PM

NAME/TITLE

_____

HOT WORK PERMIT APPROVED BY:_____ TIME_____AM/PM

NAME/TITLE

_____

THIS PERMIT TO BE POSTED AT WORK LOCATION

APPENDIX D.

Contractor Dress Code/Conduct

[This Section should have University - PBC Dress Code Policy Inserted with amendments for non-employees or contractors]

Contractor DRESS CODE
University - PBC expects all companies, contract employees, and vendors who are working in any University - PBC facilities building or property to present a professional image at all times. Safety can be greatly affected by the clothing that is worn by an individual, with this in mind; the following guideline will be followed at all times when working in any University - PBC facilities building or property.

Personal Protective Equipment: Work boots or steel-toed shoes shall be worn on all job sites. All appropriate personal protective equipment shall be utilized as needed to ensure the safety on all individuals on the job site. This shall include, but is not limited to: safety glasses, hardhats, gloves, dust masks, safety footwear, aprons and all other personal protective equipment that is required by rule, regulation, law or circumstance. Stickers or signs with questionable artwork or language is prohibited (this includes on work carts, equipment, bags, etc.).

Personal Clothing: Clothing should be clean and in good repair. No tank tops, sleeveless shirts or shorts are acceptable. Tee shirts with advertisement or questionable artwork are prohibited. Tee shirts with company logos are preferable. Clothing should fit properly; loose or hanging clothing can constitute a safety hazard.

Personal Hygiene: Each individual shall follow appropriate personal hygiene practices.

CONDUCT
It is necessary to maintain a business atmosphere within the University - PBC facilities for the staff and visitors. To that objective, the Contractor/Subcontractor is charged to reduce noise created by their work as much as possible. For that reason, no radios, tape or CD players are allowed in the University - PBC facilities or its property. Abusive, suggestive or profane language or actions shall not be permitted or tolerated.

Business Confidentiality: All Contractor/Subcontractors are reminded that at no time will it be appropriate to inquire about or discuss any staff information. Only construction or repair areas are to be entered or traversed. Under no circumstances should a Contractor/Subcontractor employee enter a staff area or any closed room without the approval of University - PBC.

Violence/Weapons: “Violence” includes not only physical contact, but also threats, bullying, stalking, intimidation and other precursors to physical violence, or any other acts or speech which would cause a reasonable person to fear for his/her personal safety or the safety of persons emotionally important to him/her. “Weapons” includes all firearms other than those carried by on-duty law enforcement officers and military personnel (firearms in privately-owned vehicles and carried by licensed persons are included within the intent of this policy).

“Weapons” also includes any device or thing which has a designed or incidental capability to kill or seriously injure human beings, and which is brought onto the University - PBC facilities premises for no legitimate reason of its own, in the best judgment of University - PBC authorities. The Contractor or Subcontractor will ensure all employees are aware of, and comply with this policy. Contractor or Subcontractor employees who violate University - PBC violence/weapons policy may be banned from the premises and will be reported to appropriate law enforcement authorities, as applicable.

Harassment: All persons on University - PBC premises, regardless of the reason(s) for their presence, are to be free from pressure or discomfort resulting from jokes, ridicule, slurs, unwanted physical contact, or any other form of harassment predicated on race, gender, sexual orientation, religion, age, national origin or ethnicity, skin color, disability, or other similar distinction. The Contractor/Subcontractor will ensure all employees are aware of, and comply with this policy. Contractor/Subcontractor employees who violate University - PBC's harassment policy may be banned from the premises.

Drug & Alcohol: University - PBC does not tolerate either possession or use of alcoholic beverages or illicit drugs on its premises, or any Contractor/Subcontractor employee coming onto its premises under the influence of either or both alcohol and/or illicit drugs. "Alcoholic beverage" means alcohol or any alcohol containing substance which has not been prescribed by appropriate medical authority. "Illicit drugs" mean any narcotic or prescription drug which has not been prescribed by appropriate medical authority. This also includes substances which are legitimate when used appropriately, but have a mind altering or other psychological effect when used inappropriately (e.g., certain glues and other substances whose fumes are misused as inhalants). "Possession" means on the person, in the personal vehicle, or otherwise under the control of a given individual. "Use" means any form of bodily intake including smoking, inhaling, snorting, ingesting, injecting or any other method of introducing the substance into the body. In the event of any question as to what is permitted under this policy, the Contractor's site supervisor will contact University - PBC for a determination.

Contractor/Subcontractor employees who violate University - PBC's alcohol/illicit drug policy may be banned from the premises and will be reported to the appropriate law enforcement authorities as applicable.

APPENDIX E.

POLICY and PROCEDURE
TITLE: Environmental Control
I. Purpose/Expected Outcome:

A. Identify and reduce visitor and staff exposure to airborne particulates or moisture from construction, renovation or routine maintenance.

B. Implement and monitor safety measures to prevent exposure to common environmental contaminants during all phases of construction, renovation, and maintenance.

II. Definitions:

A. An Environmental Control Risk Assessment (ECRA): provides the strategic, proactive design to mitigate environmental sources of microbes and for prevention of Environmental through architectural design as well as specific needs of the population served by the facility recognizing the renovation requires more compromise of air and water quality than new construction the following guidelines are adopted and implemented when appropriate.

B. ECRA Team: a small group that may include members with expertise in risk management, facility design, construction and facilities maintenance.

III. Policy:

A. An Environmental Control Risk Assessment is conducted by a team member with expertise in at least one or more, of the following, facilities services, risk management, facility design, construction, and safety.

B. Contract documents will contain specific construction related requirements for:

1. Airflow direction shall be from occupied to construction areas with placement of barriers to protect susceptible staff and visitors from airborne contaminants.
2. Take measures to prevent water pathogens from contaminating the environment during utilities services interruptions.
3. If adequate containment of airborne contaminants is not possible, staff must be relocated.
4. Debris must be removed daily and work area is cleaned as per the ECRA permit at completion of project.
5. Post construction occupancy will be contingent upon completion of ECRA.

C. Environmental Control Risk Assessment and/or Permit will be issued by a member of the panel prior to beginning any project and will require approval for all Class III and IV projects.

All classes of projects will require an Environmental Control Risk Assessment/Permit to be posted with
other Life Safety Permits at the site of construction, renovation or maintenance.

D. The worksite will be monitored to verify compliance with the Environmental Control measures as outlined on the Environmental Control Risk Assessment/Permit.

IV. Procedure/Interventions:

A. **Step One: Project Type**

Using the following table, identify the type of construction activity:

Type A	**Inspection and Non-Invasive Activities.** Includes but is not limited to: • Removal of ceiling tiles for visual inspection limited to 1 tile per 50 square feet • Painting (but not sanding) • Wall covering electrical trim work, minor plumbing, and activities which do not generate dust or required cutting of walls or access to ceiling other than for visual inspection
Type B	**Small, scale, short duration activities which create minimal dust** Includes, but is not limited to: • Access to chase spaces • Cutting of walls or ceiling where dust migration can be controlled.
Type C	**Work that generates a moderate to high level of dust or requires demolition or removal of any fixed building components or assemblies** Includes, but is not limited to: • Sanding of walls for painting or wall covering • Removal of floor coverings, ceiling tiles and casework • New wall construction • Minor duct work or electrical work above ceilings • All cabling activities
Type D	**Major demolition and construction projects** Includes, but is not limited to: • Requires heavy demolition or removal of a complete cabling system • New construction • Anything involving noise and vibration • Anything involving mold or asbestos

Step Two: Project Risk Groups
Using the following table, identify all staff risk groups that will be affected, including adjacent areas if appropriate. If more than one risk group will be affected, select the higher risk group.

Low Risk	*Medium Risk*	*High Risk*	*Highest Risk*
• Public Only Corridors • Unoccupied Space	• Office Area • Educational/Conference Areas	• Research Labs	• Laboratory • Food Prep Areas

Step Three: Project Class
Match the staff risk group (low, medium, high, highest) with the planned project type (A, B, C, D) on the following matrix, to find the level of Environmental control activities which are required.

Staff Risk Level	*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	III	III/IV	IV
Highest Risk Group	II	III	III/IV	IV

Environmental Control approval will be required when the project activity is a Class III or Class IV project. Environmental Control precautions must be maintained with all classes of projects.

V. Procedural Tools:

A. Environmental Control Risk Assessment/Permit
B. Pre-Construction Inspection Form (optional)
C. Post Construction Inspection Form (optional)
D. Construction Rounds Compliance Checklist (optional)

VI. Keywords and Keyword Phrases:

A. ECRA
B. Construction Permit
C. Construction Risk Groups

VII. Appendix:

A. Environmental Control Risk Assessment Tool
B. Rounds Checklist
C. Pre-Construction Checklist
D. Post-Construction Checklist

ENVIRONMENTAL CONTROL RISK ASSESSMENT

Location of Project/Activity:	Project Start Date:
Coordinator/Employee Performing Activity:	Estimated Duration:

Contractor Performing Work:

Supervisor:
Phone/Pager:

	Before/During Work Activity	Upon Completion of Work Activity
Class I	1. Complete Environmental control risk assessment before construction begins. 2. Execute work by methods to minimize common environmental contaminants for example dust and/or contaminated water. 3. Assess the need for PPE Immediately replace any ceiling tile displaced for visual inspection.	1. Immediately replace any ceiling tile displaced for visual inspection. Wipe surfaces with hospital approved disinfectant. 2. Wet mop with hospital approved disinfectant and/or vacuum before leaving work area where necessary.
Class II	1. Complete Environmental control risk assessment before construction begins. 2. Provides active means to prevent air-borne dust from dispersing into atmosphere 3. Water mist work surfaces to control dust while cutting. 4. Seal unused doors with tape. 5. Block off and seal air vent 6. Contain construction waste before transport 7. Assess the need for PPE	1. Wipe surfaces with hospital approved disinfectant. 2. Wet mop with hospital approved disinfectant and/or vacuum before leaving work area where necessary. 3. Remove isolation of air vents.
	Signature of ECRA panel member assessing project as Class I or II.	Date:
Class III Date: Initials:	1. Obtain Environmental control permit before construction begins. 2. Isolate HVAC system in area where work is being done to prevent contamination of the duct system. 3. Complete all critical barriers or implement control cube method before construction begins. 4. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units. 5. Place sticky mat at entrance/exit of work area. 6. Contain construction waste before transport in tightly covered containers. Tape covering unless solid lid. 7. Assess the need for PPE	1. Do not remove barriers from work area until complete project is thoroughly cleaned by Env. Services Dept and inspected by Environmental Prevention and Control. 2. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction. 3. Vacuum work area with HEPA filtered vacuums. 4. Wet mop area with hospital approved disinfectant. 5. Remove isolation of HVAC system in areas where work is being performed.
Class IV	1. Obtain Environmental control permit before construction begins. 2. Isolate HVAC system in area where work is being done to prevent contamination of duct system. 3. Complete all critical barriers or implement control cube method before construction begins.	1. Do not remove barriers from work area until completed project is thoroughly cleaned by the Environmental Service Dept. and inspected by Environmental Prevention Control. 2. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction.

Date: Initials:	4. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units. 5. Seal holes, pipes, conduits, and punctures appropriately. 6. Construct anteroom and require all personnel to pass through this room so they can be vacuumed using a HEPA vacuum cleaner before leaving work site or they can wear cloth or paper coveralls that are removed each time they leave the work site. 7. All personnel entering work site are required to wear shoe covers & change each time worker exits area. 8. Provide adhesive walk-off mats at entrance to work area. 9. Assess the need for PPE	3. Contain construction waste before transport in tightly covered containers. 4. Cover transport receptacles or carts. Tape covering if a lid is not a part of the trash receptacle. 5 Vacuum work area with HEPA filtered vacuums. 6. Wet mop with hospital approved disinfectant 7. Remove isolation of HVAC system in areas where work is being performed.

Signatures Required from Environmental Control if work determined to be Class III or IV. ----------

Additional Requirements:

Date:	Initials:	Exceptions/Additions to this Permit:	Initials
Permit Request By:	Date:	Permit Authorized by:	Date:

ENVIRONMENTAL CONTROL PERMIT

Environmental Control Permit: Guide for Determination of Class Type

Step One: Project/Activity Type -- Using the following table, identify the type of activity:

TYPE A	Inspection and Non-Invasive Activities. **Includes but is not limited to:** • **Removal of ceiling tiles for visual inspection** • **Painting (but not sanding)** • **Wall covering electrical trim work, minor plumbing, and activities which do not generate dust or required cutting of walls or access to ceiling other than for visual inspection.**
TYPE B	**Small scale, activities which create minimal dust** Includes, but is not limited to: • Access to chase spaces • Cutting of walls or ceiling where dust migration can be controlled.
TYPE C	**Work that generates a moderate to high level of dust or requires demolition or removal of any fixed building components or assemblies** Includes, but is not limited to: • Sanding of walls for painting or wall covering • Removal of floor coverings, ceiling tiles and casework • New wall construction • Minor duct work or electrical work above ceilings • All cabling activities
TYPE D	**Major demolition and construction projects** Includes, but is not limited to: • Requires heavy demolition or removal of a complete cabling system • New construction • Anything involving mold or asbestos • Anything involving noise and vibration

Step Two: Project/Activity Risk Groups -- Using the following table, identify all staff risk groups that will be affected, including adjacent areas if appropriate. If more than one risk group will be affected, select the higher risk group.

Low Risk	Medium Risk	High Risk	Highest Risk
• Office area • Public-only corridors • Educational/ • Public areas	• Office Area • Educational/Conference Areas	• Research Labs	• Laboratory • Food Prep Areas

Step Three: Project/Activity Class

Match the staff risk group (low, medium, high, highest) with the planned project/activity type (A, B, C, D) on the following matrix, to find the level of Environmental control activities which are required.

Staff Risk Level	TYPE A	TYPE B	TYPE C	TYPE D
Low Risk Group	I	II	II	III/V
Medium Risk group	I	II	III	IV
High Risk Group	I	III	III/IV	IV
Highest Risk Group	II	III	III/V	IV

Environmental Control approval will be required when the Construction Activity is a Class III or IV project. Environmental Control precautions must be maintained with all classes of projects.

APPENDIX F.

Minimum Safety Guidelines

1. Regulations:
All work shall be performed in compliance with all applicable Federal, State and local laws, statutes, rules and regulations, including, but not limited to, OSHA and EPA standards. Prime contractors and subcontractors shall provide safety representatives on site who shall be responsible for ensuring implementation of all procedures including Substance Abuse Policy (if applicable), Injury Reporting Policy, and the Minimum Safety Guidelines.

2. Personal Protective Equipment:
The contractor shall furnish, train and require employees to utilize appropriate personal protective equipment for the tasks performed. All employees shall be required to wear hard hats when in the construction area. All employees shall be required to wear safety glasses at all times when in the construction area. All workers shall be required to wear protective foot wear at all times when in the construction area (Exception: Hard hats, work boots and safety glasses are not required when in office environments, unless indoor hazards dictate their use.) Hearing protection is required where posted in addition to when noisy equipment is being used, the OSHA occupational noise exposure standard 1926.52 shall be adhered to at all times. Respiratory protection is required when dictated by environmental conditions or the work being performed. The contractor shall ensure that employees required to wear respirators have been appropriately trained, tested and are qualified for respirators use. All workers exposed to moving equipment are required to wear high visibility vests. No worker is permitted to wear ear buds (or the like) for music or phone use. Additionally, no music devices
are allowed on-site.

3. Fall Protection:
100% positive means of fall protection is MANDATORY FOR ALL CRAFTS when the fall exposure is 6 feet or greater. Any fall protection system described in 29 CFR 1926 – Subpart M or subpart R is acceptable when protecting against those exposures described in subpart M or subpart R, but is required at 6 feet and greater. A safety monitoring system is prohibited unless the contractor can prove there is no other means or equipment available to provide positive means of fall protection. A safety monitoring system is only allowed with prior approval of the University - PBC project manager and a University - PBC safety representative.

4. Speed Limit:
The contractor's personnel shall observe any posted speed limits that may be modified (lowered) from time to time as driving conditions change.

5. First Aid:
The contractor shall maintain proper first aid readiness (i.e. immediate contact with Emergency Services) on the job site for employees and shall know the location of the closest medical facilities. First aid kits shall be readily available.

6. Housekeeping:
The contractor shall maintain all staging and work areas in a clean, well-organized manner at all times. Identified paths of ingress and egress shall be kept clear of all materials and construction equipment at all times. All debris is to be contained to prevent wind and storm conditions from dispersing the debris. (See 29 CFR 1926.25) The contractor's interest in occupational and

environmental safety can often be predicted by the degree in which housekeeping is performed at staging and work areas. University - PBC will not tolerate poor housekeeping practices. The contractor shall ensure that all debris is removed prior to it interfering with the safety of employees and/or the general public, and at least daily. In addition, hoses, welding leads, power cords, etc. shall not be strung across established walkways, but shall be suspended above or below the walkway to avoid tripping hazards. (See 29 CFR 1926.25)

7. Sanitation:
The contractor shall maintain proper sanitation at the site for employees including drinking water, hand washing facilities and both male and female restroom facilities. A separate job site agreement may be made to identify and isolate a restroom for contractor employee use during a project.

8. Wind and/or Storms:
Work subject to damage from wind and storm conditions shall be secured or otherwise protected to reduce or eliminate the probability of damage from these elements. Steps shall be taken to prevent storm water from entering existing structures which are being remodeled or added to.

9. Mobile Equipment:
The contractor's personnel shall not be permitted to ride on any type of equipment unless proper cages, seats, belts or other personnel securing devices are provided and used. Also, vehicles and mobile equipment with partially obstructed rear views shall be equipped with operational backup alarms and mirrors. Spotters shall be used when mobile equipment is moving/traveling through the project or around the campus where pedestrians or vehicles are encountered.

10. Compressed Gas Cylinders:
Cylinders shall be stored in a secure upright position. Oxygen and fuel gas shall be separated by 20 feet or a barrier with ½ hour fire resistance which is 5 feet high. Valve protection caps shall be installed on cylinder without regulators. (See 29 CFR 1926.350)

11. Excavations and trenches:
Digging shall be done with the supervision of a competent person. A stairway ladder, ramp or other means of safe egress shall be provided in excavations which are 4 feet or deeper. There shall be no more than 25 feet of lateral travel to egress. All excavations must be inspected daily, prior to the start of work, by a competent person, and documented. (See 29 CFR Subpart P) Each employee in excavation shall be protected from cave-ins by adequate protection system as specified in 29 CFR 1926 Subpart P and Appendices.

12. Compressed Air:
Compressed air shall not be used to blow dirt, dust, etc., from clothing or skin. Compressed air used for cleaning materials (metallic shavings, etc.) shall be regulated to a maximum of 30 psi.

13. Public Safety:
The contractor shall use every available means to ensure the safety of the general public and contractor personnel at all staging and work locations. Installation of temporary signage, barriers and/or fencing designated to protect the public will be reviewed and approved by the General Contractor and University - PBC project manager. Sidewalks, entrances to buildings, lobbies, corridors, aisles, doors or exits will be kept clear of obstructions to permit safe access and egress for the public at all times. Qualified and trained flaggers shall be used when directing traffic.

14. Electrical Work:
Ground fault circuit interrupters are required for electrical tools and cord connections. Red emergency power outlets are not to be used unless prior approval is obtained from the University - PBC project manager. Cords and tools shall not be laid in wet locations or walkways. Pre-job inspection is required for all electric tools and cords. Defective equipment shall be removed from the work area and either repaired or disposed of. Only non-metallic ladders shall be used for electrical work. (See 29 CFR 1926 Subpart K). All contractors must adhere to NFPA 70e.

15. Blue Stake:
The contractor is responsible for ascertaining the location of all underground installations that exist in the defined work area prior to beginning the job. The contractor shall take the necessary safeguards to ensure the integrity of these systems and protection of personnel from these systems where appropriate. Remember that Blue Stake is not accurate; it is only to be used as a guide.

16. Power Lines:
The contractor shall be aware of overhead electrically energized conductors and shall ensure that personnel maintain the required separation given from materials, equipment and personnel from the conductors. OSHA for voltages to ground 50kV or below - 10 feet (305 cm); For voltages to ground over 50kV - 10 feet (305 cm) plus 4 inches (10 cm) for every 10kV over 50kV (See1910.333(c)(3)(i)(A)(2), 1910.333(c)(3)(i)(A)(1).

17. Work Clearance:
All work performed on University - PBC equipment that requires a work clearance (complete mechanical and/or electrical isolation) shall comply with applicable procedures for that purpose. The contractor will obtain all work clearances.

18. Temporary Material Storage:
Material yards or set up yards shall not be located near or under power lines. And shall be kept clean and organized to reduce the amount of combustibles. Special attention shall be given to crane safety and the OSHA regulations requiring specific minimum clearances from electrically energized conductors. A signalman shall be used when required.

19. Lockout/Tagout (LOTO): (OSHA CFR 1910.147)
All work performed that requires the control of hazardous energy (a.k.a. Lock Out Tag Out) to achieve zero mechanical state, shall be communicated and coordinated with University - PBC and University - PBC
maintenance personnel. This applies specifically to the use of multiple hasp locks and tags when controls are applied and when they are removed from electrical panels, piping, machines or equipment.

20. Existing Equipment and Systems:
All electrical and mechanical switching on University - PBC equipment shall be done in accordance with
applicable industry procedures. A University - PBC facilities representative shall be present when any existing equipment or system is disrupted or shut down. Unless prior approval is obtained, no contractor shall exercise any switches or valves that are part of the existing equipment or system.

21. Barrier Tape and Flagging:
The contractor shall ensure that all personnel are familiar with, and comply with barrier tapes. Red barrier tape with "Danger" tags attached shall indicate a dangerous condition within the taped area and that entrance into the taped area is prohibited without authorization of the individual whose

name appears on the tag. Yellow or yellow and black barrier tape with “Caution” tags attached indicates that caution is necessary within the taped area. Entrance is permitted as long as personnel take the necessary precautions to protect themselves from the hazardous condition(s). The lack of attached "Danger" or "Caution" tags does not change the meaning of the colored barrier tape. (See 29 CFR 1926 subpart G)

22. Scaffolding:
Scaffolding, shall be erected, dismantled or modified only under the supervision of a competent person. Proper access must be provided to all scaffolds. Footings need to be secured. A guardrail system is required on all scaffolds/work platforms more than 6 feet high. Toe boards are required on scaffolds/work platforms more than 6 feet high.

Employers are required to provide fall protection for employees erecting or dismantling supported scaffolding per 1926.451 (g)(2). No one may ride on a manually propelled scaffold unless it has a standard railing system and is moved from the flooring surface. Wheels must be locked on all rolling scaffolds when not being moved.

23. Hazard Communication:
The contractor shall maintain (a full and up to date “chemical inventory list”) listing of all chemical products and a copy of each product’s Material Safety Data Sheet (MSDS) for chemicals on the construction site readably available in a predetermined location. (See 29 CFR 1926.59 and 29 CFR 1910.1200)

24. Chemical Waste:
All solvents and other chemical-cleaning agents, when used, shall be collected, contained and properly labeled as specified by industry practice. Under no circumstances are waste solvents and/or other chemicals to be dumped on the ground, down drainage systems or placed in regular trash receptacles. The contractor will be responsible for the disposal of any hazardous waste, and shall comply with all regulations pertaining to the disposal of such.

25. Hazard Communication Training:
Contractors and subcontractors must have a hazards communication program to inform personnel of the hazards associated with the chemicals they work with. To assure that all on-site personnel are trained in the recognition and avoidance of hazards, training must also be provided in the personal protective equipment to be used in association with the use of these chemicals.

26. Mold or Asbestos:
Mold or asbestos may be found on University - PBC properties. The contractor's personnel shall be familiar with the applicable safety and environmental rules governing these substances prior to their disturbance. If mold or asbestos are encountered STOP WORK IMMEDIATELY and notify University - PBC project manager.

27. Solid Waste:
Empty drums, bags or other chemical containers to be disposed of shall be emptied as much as possible by pumping and/or pouring and shall be labeled and located safely. The contractor shall be responsible for the proper disposal of such containers, bags, drums, etc.

28. Spill Reporting:
The contractor shall immediately report any accidental spillage of hazardous substances, solvents or cleaning agents to the general contractor, project manager and/or University - PBC Safety Representative. The spillage shall be contained and removed by the contractor.

29. Cranes and Rigging:
Verify that crane inspection and servicing is current for all construction cranes. Identify at least one person per shift to serve as the “competent person” for crane inspections and general safety issues. Document all crane inspections and servicing performed internally or by a vendor, as well as any crane training conducted. Provide swing radius protection when necessary. Only qualified persons may signal cranes. (See 29 CFR 1926.201, .550 and .602). Only qualified persons may rig loads. Crane operators are to be tested for competency in the equipment they will be using on site. All crane lifts will be preplanned, documented and reviewed by the contractor and University - PBC safety team. Critical lifts are defined as lifts over 75% of the load chart. A third party shall confirm critical lift load calculations. Crane setup must be in compliance with ANSI and the manufacturer’s recommendations. Anti two-blocking devices are required on all cranes.

30. Manufactured Ladders: (OSHA CFR 1926.1053)

a). Ladders with broken or missing rungs, broken or split side rails or otherwise damaged, shall not be used.

b). All portable ladders shall be equipped with non-skid safety feet and shall be placed on a stable base. The access areas at the top and bottom of ladders in use shall be kept clear.

c). The side rails shall extend 36 inches above the landing. When this is not practical, grab rails shall be installed. All ladders in use shall be tied, blocked or otherwise secured to prevent accidental displacement.

31. Job Made Ladders:
Job-made ladders shall be fabricated in compliance with the regulations in OSHA 1926.1053. The general rules applying to the use of manufactured ladders also apply to the use of job made ladders.
NOTE: The contractor shall provide additional runways and ladders as he may require for the execution of the work. All such apparatus, equipment and construction shall meet all requirements for safety and all provisions of laws and ordinances applicable thereto. Permanent stairs shall be erected as soon as possible, and the contractor shall provide same with temporary protective treads, handrails and shaft protection.

32. Ladder Training shall be in accordance with OSHA 1926.1060.

33. Specific University - PBC and site regulations may dictate the identification of additional items.

APPENDIX G.

Above Work Ceiling Permit

Location of Work_____ Date Work Starts:_____
Contractor's Name:_____ Date Scheduled Complete:_____
On Site Lead:_____ On Site Lead Phone:_____
On Site Supervisor's Name:_____ Contact Number:_____

Pre-Work Information: (Contractor) * * MUST BE POSTED AT WORK LOCATION * *
Brief scope of work to be done:
_____

How many wall penetrations?_____ How many are fire/smoke walls?_____

Have the applicable asbestos reports been reviewed? Yes_____ No_____

Names of trained firestop installers for this project (attach firestop training certificate)
_____ _____ _____

Attach a map of the entire area and scope of work to be done. Initials: _____ Date:_____

Received and Approved: (Facilities personnel):_____ Date:_____

Post-Work Information: (Contractor)

1. Have all fire/smoke wall penetrations have been sealed per an approved UL system, OPL system, or engineering judgment, by the above installers and flagged for inspection?

Yes No

2. Have all abandoned materials and debris created by your work been removed

Yes No

Signature Indicating Compliance: _____

Post-Work Inspection: (Facilities Services)

I have inspected the above work and release the project as complete.
Inspection Type: Total Spot

Signature:_____ Emp: #_____ Date:_____

QC Inspection (optional) Signature:_____ Date:_____

APPENDIX H.

Water Intrusion from Fire Sprinklers and Domestic Water Events Toolbox and Checklist

University - PBC tries to avoid loss exposures related to water intrusion from fire sprinklers and domestic water systems. Historically, losses have occurred from fire sprinklers or domestic water systems being damaged during construction work, maintenance work, and cleaning practices. This discussion will address proactive and response measures when a water intrusion event occurs related to fire sprinklers and domestic water events. Whenever the term “contractor” is used it shall mean any employee, agent, contractees, subcontractors, vendors, and any other person or entity providing services to University - PBC.

Proactive: Preconstruction and Pre-Activity Planning:

• Be aware of the locations of all shut off valves including fire sprinkler, domestic water, medical gas, electrical, and plumbing. A map of shut off valve locations should be included in all work areas with pre-task planning identifying potential water intrusion events.
• Be aware that fire sprinklers and/or domestic water lines in one area could be fed by various loops and multiple systems/zone valves may need to be identified. Walk with your facilities or development and construction liaison, communication is the key to minimizing events.
• Verify water is drained or shut off prior to working on the fire sprinkler system.
• Fire sprinkler heads will be flagged and/or cage within the construction area. Cages may not fit over the sprinkler and therefore flagging is used as a visual indicator for the presences of a fire sprinkler head.
• Understand that a cage will only minimize not prevent damage to a fire sprinkler. Caution shall always be taken when working in an area with fire sprinklers even when they are caged or flagged.
• Be aware of fire sprinkler heads directly outside of the construction area and understand that they are exposed to damage when moving construction materials (i.e. ladders, pipe, etc.). Provide appropriate signage for the work area will enhance awareness.

Proactive – Working in Existing Areas:

• Pre-task planning is crucial before beginning the work activity. Do not drill into existing ceilings or walls without an above ceiling and/or wall investigation. Water, waste, and drain lines can be horizontal and vertical within the wall cavity.
• Never leave water, waste, and/or drain lines open even if not live. Connect or

cap the lines after each shift.
• Lock out valves, with facilities input, when making tie-ins to existing systems.
• Always cap and test the system before leaving the job site. When water is being introduced to a system, a “water watch” should be implemented (similar to a fire watch) with all activities completed one hour before the end of a shift.

• Contractors and trade foremen should conduct a daily “end of work shift walk” for a visual check of all systems.

Response:
• Immediately report all incidents involving the fire sprinkler/domestic water system to your immediate supervisor.
• All contact numbers are readily available and it is your responsibility to know and follow pre-established response procedures.
• Know where and how to use the emergency water intrusion spill kits. The following are items that may be found in the spill kit:

- o Contact list for both regular and after hours.
- o Compression fittings (various sizes of ball and straight couplings)
- o Duct tape
- o Extension cord
- o Fire sprinkler shut off tool
- o Garbage bags
- o GFCI adapter
- o Trash container or gondola
- o Hose – pool
- o Moisture meter
- o Mop and mop heads
- o Portable electric pump
- o Squeegee
- o Visqueen (6 mill or thicker)
- o Water absorbing diapers
- o Water displacing solvents
- o Water socks
- o Wet/dry vacuum

Communication

• It is each individual’s responsibility to immediately report any identified water intrusion whether it is due to your work or not.
• The prime contractor must verify that all notifications have been made to PBC University - Development and Construction, Facilities Services, Operational Team and Risk Management.
• The prime contractor must file an incident report within 24 hours of event.
• Communicate immediately to the affected Facility the extent of damage to the area and projected downtime.

FIRE SPRINKLER AND DOMESTIC WATER INTRUSION CHECKLIST

Location:	**Project Name:**
Date:	**Facilities Signature:**
Project Manager Signature:	**General Contractor Signature:**

ACTION ITEM	Y/N DATE COMPLETED	COMMENT
1) Pre-job walk with D&C and Facilities to develop a POA		
2) Identify high risk areas below and adjoining project & POA developed		
3) Identify existing in wall plumbing lines, locate all shut off valves		
4) Identify loops or multiple systems/zone valves		
5) Post plans with shut off valve locations and emergency contact numbers		
6) Add valve to Sprinkler system to control construction area		
7) Add lockout tagout measures to sprinkler isolation valve		
8) Develop fire watch plan if construction area can be isolated		
9) Water intrusion spill response cart purchased and available at the site		
10) Cage and flag all active sprinkler heads within the work area		

11) Before beginning work on active systems verify line has been drained by tapping or drilling a small hole in area to be replaced		
12) Provide education on excersing valves and which types that can and can't be exercised		
13) Provide education on proper cleaning of fire sprinkler heads		
14) Use heat detectors in lieu of smoke detectors in construction areas		
15) Cap all water, waste and drain lines before end of work shift		
16) Locate in wall plumbing by above ceiling and wall investigation		
17) CM & foreman walk project at the end of shift to identify potential leaks		

APPENDIX I.

UTILITY SYSTEM/EQUIPMENT IMPACT REQUEST

Seven calendar days are required for approval

To:

From:

Date of Request:

_____ is requesting an Shutdown, Investigation, Impact permit approval for the building utility or equipment. Submit a separate request for each system.

Select the system to be shutdown investigated or impacted:

- ☐ Domestic Hot Water Domestic
- ☐ Cold Water RO Water System
- ☐ Normal Electrical
- ☐ Emergency Electrical
- ☐ Transfer Switch
- ☐ Generator
- ☐ Centralized UPS
- ☐ Fire Sprinkler-wet

☐ Fire Sprinkler-pre-action

☐ Fire Alarm

☐ Air Handler

☐ Exhaust System

☐ Steam System

☐ Condensate

☐ Heating Hot Water

☐ Elevator Other:

Time Frame of Action:

Start: _____ End: _____

Name of person on-site during the time of the shutdown/impact

_____

Telephone number of the on-site person during the shutdown/impact

_____

Identify department or areas impact by request:

Description of Work:

_____
_____
_____

What is your contingency plan if actions do not go as planned?

_____
_____
_____
_____
_____

Coordination Required:

ECRA Attached? Yes N/A
ILSM Attached? Yes N/A

Approved: _____ Date: _____