Attachment B

Infection Control Risk Assessment for Construction/Maintenance

INFECTION CONTROL RISK ASSESSMENT (ICRA)

Project Name / EWO Description:	Renovation Drug Screening Room		Project # /EWO # 660-14-095
Location of Activity: bldg. 14 Lab Area 1B31A		Start Date: TBD	Estimated Duration: 90 Days
Project Manager: Ryan Casey		Contractor: TBD	ICN: Susan O'Connor - Wright
Project Manager Phone #: 4589		Contractor Phone #:	ICN Phone #: ext. 5708

STEP #1: Select Risk Group Below and Mark Bottom of Column

A) INFECTION CONTROL RISK GROUPS

Group 0	Group 1	Group 2 - Medium Risk		Group 3 - Medium High Risk
Lowest Risk	Low Risk	Laboratories	Imaging	Emergency Room (ECG)
Nonmedical	Office Areas	3 West	Laundry	Post Anesthesia Care
associated spaces	associated with	Acute Medicine (2 East, 2 North)	Nuclear Medicine	All ICUs
				Area Requiring Post-Construction Legionella Testing Evaluation.
(no patient	patient activity)	8.2	Out Patient Clinics	
activity)		8.3 Inpatient Mental Health Ward	Out Patient Surgery	Group 4 - Highest Risk
		Cardiac Kitchen	Patient Kitchen & Dining	All ORs
		Cardiology	Pharmacy (In & Out Patient)	Sterile Processing
		Decontamination	PT / OT	Ambulatory Medicine Unit (2 West)
		Dental	Public Corridor (patient activity)	Cardiac Cath/Angiography
		Distribution	Pulmonary / Bronchoscopy	Dialysis Unit
		G.I. Lab	Telemetry	Pharmacy IV Prep (Inpatient)
			Area Requiring Post-Construction Legionella Testing Evaluation.	Area Requiring Post-Construction Legionella Testing Evaluation.
		Hospital		

STEP #2: Select Activity Type Below:

B) CONSTRUCTION ACTIVITY TYPES:

Type A Inspection and Non-Invasive Activities, includes but is not limited to, manipulation of ceiling tiles, painting (but not sanding), wallcovering, electrical trim work, minor plumbing, installation of telephone and computer cabling, and activities which do not (1) generate dust or (2) require cutting of walls.

Type B Small scale, short duration activities which create minimal dust. Includes, but is not limited to, (1) access to chase spaces, (2) cutting of waste or ceilings, where dust migration can be controlled.

Type C Any work which 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, (1) sanding of walls for painting or wall covering, (2) removal of floorcoverings, (3) multiple ceiling panels and (4) casework, (5) new wall construction, (6) minor duct work or (7) electrical work above ceilings, (8) major cabling activities, and (9) any activity which can be contained within a single workshift.

Type D Major demolition and construction projects. Includes, but is not limited to, (1) activities which require consecutive work shifts, (2) requires heavy demolition or (3) removal of a complete cabling system, (4) new construction, and (5) any activity which cannot be contained within a single workshift.

STEP 3: Determine Class of Precautions Using Matrix Below:

CONSTRUCTION ACTIVITY/INFECTION CONTROL MATRIX TO DETERMINE CLASS

** ICN must be consulted when the assessment indicates that Class II, III, or IV precautions are required.

	Construction Activity Type			
Risk Level	Type "A"	Type "B"	Type "C"	Type"D"
Group 0	Refer to OSHA Requirements	Refer to OSHA Requirements	II	II
Group 1	I	I	II	III
Group 2	I	II	III	IV
Group 3	I	II	III/IV	IV
Group 4	II	III	III/IV	IV

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INFECTION CONTROL DURING CONSTRUCTION

Design Issues:

HVAC: Bottom of outdoor air intakes serving central system 6 feet above ground or 3 feet above roof

Exhaust system above roof and 75 feet from air intake

Fresh air intakes 25 feet from exhaust outlets of vent system, combustion equip. stacks, medsurg vacuum system, plumbing vents, or area near vehicle exhaust or other fumes.

Carpet: Avoid in clinical areas (including hallways). Never in areas of frequent spillage or heavy soilage (OR's, ICU's & Labs)

Water: Mains, branch mains, risers, and branches to a group of fixtures have stop valves

No built-in soap dispensers

Adequate room for single-use paper towel dispensers & waste disposal

Floor drains should be avoided

Sinks: Easily accessible; nearby surfaces are nonporous to resist fungal growth

Cooling Towers: New: Direct tower drift away from air intake system. Operational: Drift eliminators present & biocides use regularly

Area- Specific Design Guidelines:

OR & Delivery Room: air supply from ceiling outlets near center of work area. Returns (at least 2 & far apart as feasible) near floor.

Water: No floor drains.

Isolation Rooms:

Negative Pressure: 12 ACH

Exhaust to outside or recirculated after HEPA filtration.

Separate toilet, bathub (or shower) & sink.

Adequate room for handwashing, gowning & storage of clean & soiled materials.

Sinks: Foot, knee, or sensor control units when risk of touch contamination (ex: OR)

AIR in OR's: Must have at least 90% filters

Anesthesia exhaust grills: may be in ceiling

BMT's or Protected Environment Rooms: HEPA filtered.

BMT or Solid Organ Transp: Positive Pressure: >12 ACH

Anteroom(s) recommended for all rooms (at least 1 room for patient with airborne infection).

Best (air flow): Hallway negative to anteroom & positive to patient room

Rooms well sealed and HEPA filtered.

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Class I	1. Execute work by methods to minimize raising dust.	4. Worker traffic routes should minimize contact with patients - after hour work as necessary
	2. Immediately replace ceiling tiles removed for inspection.	5. Minimize exposure of patients to construction and maintenance.
	3. Transportation route or storage for clean supplies not near contaminated materials.	6. Execute post-construction legionella testing evaluation.
Class II	*In Addition to Class I Precautions:*	8. Wet mop area daily & place "tack" mats at all entrances/exits. Refresh tack mats frequently (at least daily).
	1. Consult Infection Control Nurse prior to beginning work.	9. Use HEPA vacuum to capture dust during dust-producing work.
	2. Educate VA staff regarding construction activity.	10. Remove and replace wet ceiling tiles if the porous type.
	3. Stock & seal air vents before starting.	11. If ceiling tiles are nonporous, remove and clean with hospital approved disinfectant and dry before replacement.
	4. Coordinate air filter maintenance with Operations.	12. Use only designated elevators (e.g. utility) for debris removal.
	5. Contain area to one room with walls from floor to ceiling.	13. Execute post-construction legionella testing evaluation.
	6. Close non-access doors and duct tape frames and doors.	
	7. Transport debris in covered containers that are wiped down.	
Class III	*In Addition to Class I and II Precautions Above:*	*Prior to Patient Occupancy:*
	1. Consult Infection Control Nurse prior to beginning work.	Water lines flushed at site & adjacent areas.
	2. Install dust partitions (including work in ceilings) prior to start. Partitions must be well sealed from floor to ceiling. Plastic seams must be sealed.	Execute post-construction legionella testing evaluation.
	3. Remove dust partitions carefully to minimize spread of dust & dirt.	Vent system cleaned & balanced after completion of construction.
	4. Mist debris removal chutes & dumpsters.	Construction area thoroughly wet mopped and disinfected.
	5. Assure adjacent air filtering systems are functioning.	Check room temperatures and adjust if needed.
	6. Maintain negative pressure in construction area. Use hog vented to outside through old exhaust hood opening.	
Class IV	*In Addition to Class I, II, and III Precautions Above:*	
	1. Consult Infection Control Nurse	
	2. Relocate patients to area remote from construction area.	

Legionella mitigation: Immediately after completing connections run water at distal sites from work for 5 minutes. Testing per water team.

ICN Signature: Susan O'Connor-Wright

Date Reviewed: 102014

INTERIM LIFE SAFETY MEASURES ASSESSMENT

Project Name and Number:

	YES/NO	A) Notify Emergency Teams & Implement Fire Watch	B) Post signage identifying location of alternate exits	C) Special measures	D) Inspection to ensure clear egress	E) Ensure fire alarm and detection system is operational	F) Additional fire fighting equipment	G) Temporary corridor to battery	H) Board up openings of bldgs., systems, equipment	I) Enhance bldgs., housing, and debris removal	J) Additional training on use of fire fighting equipment	K) Conducting Additional fire watch patrols (24/7)	L) Inspect, Test, Document fire alarm & fire suppr. monthly	M) Education of bldg. occ. construction hazards.	N) Other
Patient room door latching problem	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Lacking a code complying file or smoke barrier	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Fire exit stairs discharge improperly	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Excessive travel distance to an approved exit	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Lack of two remote exits	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Nonconforming building construction type	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Improperly protected vertical openings	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Large penetrations in fire or smoke barriers	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Corridor walls do not extend to the structure (or to drop ceiling smoke seal)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Hazardous areas not properly protected	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Blocking off an approved exit	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Rerouting emergency room traffic	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Major renovation of an occupied floor	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Replacing fire alarm system (out of service) > 4 hrs. / 24 hr. period	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Installing a sprinkler system (out of service) > 4 hrs. / 24 hr. period	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Significantly modifying smoke or fire barrier walls	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Adding an addition to an existing structure	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Taking a fire alarm system off line	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Taking a sprinkler system off-line	YES if over 4 hours	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Disconnecting alarm devices	NO	NO	NO	NO	NO	NO	X	NO	X	NO	X	NO	NO	NO	NO
Other															
Additional Assessment Notes:															

Assessment Performed by: _____ Paul Moore Date: 1/22/2014

Safety Officer Review: Paul Moore Date: 1/24/2014

Construction Safety Risk Assessment Checklist, VA Salt Lake City Healthcare System

Project Name: Renovate for drug screening Program

Project Number: 660-14-095

Date: 1/22/14

Project Manager: J Casey Ryan

Hazard Likelihood: High: 76% - 100% Medium: 51% - 75% Low: 0% - 50%

Identify Hazards	Evaluator	Is Hazard Likely? H-M-L	Severity H-ML	Mitigation Needed? Y/N	Mitigation Strategies	Mitigation Strategies Implemented?	Comments
Hazard Communication		L		N	MSDS required to be maintained on site by contractor		
Respiratory Protection		L		N	respiratory protection required when air debris present		
Personal Protective Equipment		L		N	hearing protection. Steel toe shoes, clothing when required.		
Fire Protection		L		N	contractor required to follow VA hot work permit procedure & VA Interim Life Safety Measure		
Traffic Control & Site Security		L		N	Work affecting traffic flow or site security must be coordinated with VA		
Wire Rope and Rigging Equipment		L		N	OSHA Procedure to be followed		
Demolition		L		N	Any work causing noise or vibration to interior Of Medical Center must be coordinated with VA		
Hand and Power Tools		L		N	OSHA Procedure to be followed		
Electrical		L		N	All hot work on electrical systems must receive prior approval by VA		
Lockout / Tagout		L		N	Lockout/tagout procedure required in contractor submitted Safety plan (pre-construction)		
Welding and Cutting		L		N	VA signed hot work permit required to be obtained by contractor		
Confined Spaces		L		N	OSHA Procedures & VA Confined Space Policy must be followed		
Tunnels and Shafts		L		N	OSHA Procedures & VA Confined Space Policy must be followed		
Identify Hazards	**Evaluator**	**Is Hazard Likely? H-M-L**	**Severity H-ML**	**Mitigation Needed? Y/N**	**Mitigation Strategies**	**Mitigation Strategies Implemented?**	**Comments**
Process Safety Management - Piping Systems		L		N	Coordination with VA for affects on existing systems		
Cranes and Hoists		L		N	Rigging Plan to be approved by VA. Pre lift crane assessment + logs required on site		
Steel Erection		L		N	OSHA procedured to be followed		
Fall Protection		L		N	OSHA procedured to be followed		
Scaffolds		L		N	OSHA procedured to be followed		
Ladders		L		N	OSHA procedured to be followed		
Trenching and Excavation		L		N	OSHA procedured to be followed		
Motor Vehicles, Earthmoving, and Mechanized		L		N	Preventative maintenance logs required on site		
Concrete and Masonry		L		N	OSHA procedured to be followed		
Lead, Asbestos, and Silica		L		N	Coordination with VA required to identify all accessible suspect ACM building materials in affected facility where demolition will occur		
Utility Interruptions		L		N	Must receive approval from VA		
Dust		L		N	respiratory protection required when air debris present. Dust partitions must be utilized as needed		
Moisture/Water Leaks		L		N	Notification to VA required for all moisture/Water leaks		
Vapors/Fumes		L		N	Anything that may introduce vapor fumes to interior of Medical Center must be coordinated with VA prior to commencement		
Noise		L		N	Any work causing noise to interior Of Medical Center must be coordinated with VA		
Identify Hazards	**Evaluator**	**Is Hazard Likely? H-M-L**	**Severity H-ML**	**Mitigation Needed? Y/N**	**Mitigation Strategies**	**Mitigation Strategies Implemented?**	**Comments**
Vibration		L		N	Any work causing vibration to interior Of Medical Center must be coordinated with VA		
Open Outside Walls		L		N	All site security deficiencies that may be introduced must be coordinated with VA		
Impact to Levels Above and Below		L		N	Coordinate with VA prior to impact to facility		
Proximity of Air Intakes		L		N	Cover and seal intakes		
Pest Control within Construction Area		L		N	Pest control precautions must be utilized for any openings introduced to existing facility		

Approval Signatures:

Project Manager:	J Casey Ryan	Date:	1/22/2014
Contractor:	TBA	Date:	
Safety Manager:	Robert Huffman	Date:	1/22/2014
Svc./Section/Program Director:		Date:	

Revisions	Date	Civil	Mechanical / Electrical	Structural	Architect	Stamp	CADD Information	Drawing Title	Project Title	Date	Drawing No.
							H:\Border\risk assesment.dwg	RISK ASSESSMENT	Renovate for Drug Screening Program	01/22/2014	S-1
							Approved:	Approved: Medical Center Director	Drawn: JCR / Architects Project No.	Project No. 660-14-095	Dwg. 1 of 3
							Approved:	Approved: Chief, Engineering	Checked: -	Building Number B.14	Department of Veterans Affairs