

# Infection Control Risk Assessment

## Matrix of Precautions for Construction & Renovation

Project Name: 3<sup>rd</sup> Floor

### Step One:

Using the following, *identify* the Type of Construction Project Activity (Type A-D)

#### 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)
- wallcovering, electrical trim work, minor plumbing, and activities which do not generate dust or require cutting of walls or access to ceilings other than for visual inspection.

#### TYPE B Small scale, short duration activities which create minimal dust

Includes, but is not limited to:

- installation of telephone and computer cabling
- 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 floorcoverings, ceiling tiles and casework
- new wall construction
- minor duct work or electrical work above ceilings
- major cabling activities
- any activity which cannot be completed within a single workshift.

#### TYPE D Major demolition and construction projects

Includes, but is not limited to:

- activities which require consecutive work shifts
- requires heavy demolition or removal of a complete cabling system
- new construction.

STEP 1: Type D

### Step Two:

Using the following, *identify* the Patient Risk Groups that will be affected.

If more than one risk group will be affected, select the higher risk group:

**Low Risk Medium Risk High Risk Highest Risk**

- Office areas

**Medium Risk**

- Echocardiography

- Endoscopy
- Nuclear Medicine
- Physical Therapy
- Radiology/MRI
- Respiratory Therapy

**High Risk**

- Emergency Room
- Labor & Delivery
- Laboratories
- Newborn Nursery
- Outpatient Surgery
- 3<sup>rd</sup> Floor Medical/Pediatrics
- Pharmacy
- Post Anesthesia Care Unit
- 5<sup>th</sup> Floor Surgical
- SNF/Rehab Care

**Highest Risk**

- Any area caring for immunocompromised patients
- Cardiac Cath Lab
- Central Sterile Supply
- Intensive Care Units
- Isolation rooms
- Operating rooms including C-section rooms

**Step 2**                     **High Risk**

**Step Three:** Match the Patient Risk Group (*Low, Medium, High, Highest*) with the planned Construction Project Type (*A, B, C, D*) on the following matrix, to find the ...  
Class of Precautions (*I, II, III or IV*) or level of infection control activities required.

Patient Risk Group	Construction Project Type			
	Type A	Type B	Type C	Type D
Low Risk	I	II	II	III/IV
Medium Risk	I	II	III	IV
High Risk	I	II	III/IV	IV
Highest Risk	II	III/IV	III/IV	IV

**Step 3**                     **IV**

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

CLASS I	<ol style="list-style-type: none"> <li>1. Execute work by methods to minimize raising dust from construction operations.</li> <li>2. Immediately replace all ceiling tile displaced for visual inspection</li> </ol>	
CLASS II	<ol style="list-style-type: none"> <li>1. Provide active means to prevent airborne dust from dispersing into atmosphere.</li> <li>2. Water mist work surfaces to control dust while cutting.</li> <li>3. Seal unused doors with duct tape.</li> <li>4. Block off and seal air vents.</li> <li>5. Place dust mat at entrance and exit of work area.</li> <li>6. Contain construction waste before transport in tightly covered containers.</li> </ol>	<ol style="list-style-type: none"> <li>1. Wipe work surfaces with disinfectant.</li> <li>2. Wet mop and/or vacuum with HEPA filtered vacuum before leaving work area.</li> <li>3. Remove isolation of HVAC system in areas where work is being performed.</li> </ol>
CLASS III	<ol style="list-style-type: none"> <li>1. Obtain infection control permit before construction begins.</li> <li>2. Remove or Isolate HVAC system in area where work is being done to prevent contamination of duct system.</li> <li>3. Complete all critical barriers i.e. sheetrock, plywood, plastic, to seal area from non work before construction begins.</li> <li>4. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units.</li> <li>5. Contain construction waste before transport in tightly covered containers.</li> <li>6. Place dust mat at entrance and exit of work area.</li> </ol>	<ol style="list-style-type: none"> <li>1. Do not remove barriers from work area until completed project is inspected by the Safety Department and Infection Control Department and thoroughly cleaned Environmental Services Dept.</li> <li>2. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction.</li> <li>3. Vacuum work area with HEPA filtered vacuums.</li> <li>4. Wet mop area with disinfectant.</li> <li>5. Remove isolation of HVAC system in areas where work is being performed.</li> </ol>
CLASS IV	<ol style="list-style-type: none"> <li>1. Obtain infection control permit before construction begins.</li> <li>2. Isolate HVAC system in area where work is being done to prevent contamination of duct system.</li> <li>3. Complete all critical barriers i.e. sheetrock, plywood, plastic, to seal area from non work before construction begins.</li> <li>4. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units.</li> <li>5. Seal holes, pipes, conduits, and punctures appropriately.</li> <li>6. Construct anteroom with dust mats and require all personnel to pass through this room. One dust mat should be wetted and the other dry. Require all personnel to wipe shoes on mats before leaving anteroom. Or they can wear cloth or paper coveralls that are removed each time they leave the work site.</li> <li>7. Contain construction waste before transport in tightly covered containers.</li> </ol>	<ol style="list-style-type: none"> <li>1. Do not remove barriers from work area until completed project is inspected by the Safety Department and Infection Control Department and thoroughly cleaned by Environmental Services Dept.</li> <li>2. Remove barrier material carefully to minimize spreading of dirt and debris associated with construction.</li> <li>3. Vacuum work area with HEPA filtered vacuums.</li> <li>4. Wet mop area with disinfectant.</li> <li>5. Remove isolation of HVAC system in areas where work is being performed.</li> </ol>

**Step Four:** Identify the areas surrounding the project area, assessing the potential impact.

Unit Below	Unit Above	Lateral	Lateral	Behind	Front
Offices, Post-Partum	Rehab	ICU	NA	NA	NA
Risk Group - High	Risk Group - High	Risk Group - Highest	Risk Group	Risk Group	Risk Group

Will have minimal impact on offices, post-partum and Rehab. Greatest impact will be on ICU in that access to ICU will have to be via elevator. Access from 3<sup>rd</sup> floor area will be closed during remodel of 3<sup>rd</sup> floor east wing.

**Step Five:** Identify specific site of activity, eg. Patient rooms, medication room, etc.

All areas on medical/surgical unit to include patient rooms, bathrooms, nurse stations, clean utility, soiled utility and other staff support areas.

**Step Six:** Identify issues related to: ventilation, plumbing, electrical in terms of probably outages.

Each wing will be isolated during remodel of that specific wing which will provide complete isolation of that wing from other occupied areas. Therefore ventilation, plumbing, electrical, etc., issues will be minimal to other areas.

**Step Seven:** Identify containment measure, using prior assessment. What types of barriers? Will HEPA filtration be required?

HVAC system will be isolated in area where work is being performed. Negative pressure within work site utilizing HEPA air filtration units. Constructing of anteroom with dust mats at entrance. Construct smoke, dust tight barriers between area under construction and occupied spaces.

**Step Eight:** Consider potential risk of water damage. Is there a risk due to compromising structural integrity?

Minimal water damage risk. No structural integrity risk.

**Step Nine:** Works hours: Can or will the work be done during non-patient care hours?

Most of the work will be performed during normal working hours.

**Step Ten:** Do plans allow for adequate number of isolation/negative airflow rooms?

Yes

## Infection Control Construction Permit

Location of Construction: 3 <sup>rd</sup> floor				Project Start Date: April 2011			
Project Manager:				Estimated Duration:			
YES	NO	CONSTRUCTION ACTIVITY	YES	NO	INFECTION CONTROL RISK GROUP		
		Type A: Inspection, non-invasive activity			Group 1: Low Risk		
		Type B: Small scale, short duration, moderate to high levels			Group 2: Medium Risk		
		Type C: Activity generates moderate to high levels of dust, requires greater than 1 work shift for completion	X		Group 3: High Risk		
X		Type D: Major duration and construction activities requiring consecutive work shifts			Group 4: Highest Risk		
Class of Precautions Required for Project: <span style="font-size: 1.5em; vertical-align: middle;">IV</span> See below for class details.							
During Construction Project				Upon Completion of Project			
Class I		<ol style="list-style-type: none"> <li>Execute work by methods to minimize raising dust from construction operations.</li> <li>Immediately replace any ceiling tile displaced for visual inspection.</li> </ol>					
Class II		<ol style="list-style-type: none"> <li>Provides active means to prevent air-borne dust from dispersing into atmosphere.</li> <li>Water mist work surfaces to control dust while cutting.</li> <li>Seal unused doors with duct tape.</li> <li>Block off and seal air vents.</li> <li>Place dust mats at entrance and exit of work area.</li> <li>Contain construction waste before transport in tightly covered containers.</li> </ol>		<ol style="list-style-type: none"> <li>Wipe surfaces with disinfectant.</li> <li>Wet mop and/or vacuum with HEPA filtered vacuum before leaving work area.</li> <li>Remove or isolate HVAC system in areas where work is being performed.</li> </ol>			
Class III		<ol style="list-style-type: none"> <li>Obtain infection control permit before construction begins.</li> <li>Isolate HVAC system in area where work is being done to prevent contamination of the duct system.</li> <li>Complete all critical barriers.</li> <li>Maintain negative air pressure within work site utilizing HEPA equipped air filtration units.</li> <li>Do not remove barriers from work area until complete project is thoroughly cleaned by EVS dept.</li> <li>Contain construction waste before transport in tightly covered containers.</li> </ol>		<ol style="list-style-type: none"> <li>Do not remove critical barriers from work area until completed project is inspected by the Safety Dept. and Infection Control Dept. and thoroughly cleaned by Environmental Services Dept.</li> <li>Vacuum work with HEPA filtered vacuums.</li> <li>Wet mop with disinfectant.</li> <li>Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction.</li> <li>Remove or isolate HVAC system in areas where work is being performed.</li> </ol>			
Class IV		<ol style="list-style-type: none"> <li>Obtain infection control permit before construction begins.</li> <li>Isolate HVAC system in area where work is being done to prevent contamination of the duct system.</li> <li>Complete all critical barriers.</li> <li>Maintain negative air pressure within work site utilizing HEPA equipped air filtration units.</li> <li>Seal holes, pipes, conduits, and punctures appropriately.</li> <li>Construct anteroom with dust mats and require all personnel to pass through this room. One dust mat should be wetted and the other dry. Require all personnel to wipe shoes on mats before leaving anteroom. Or they can wear cloth or paper coveralls with shoe covers that are removed each time they leave the work site.</li> <li>Contain construction waste before transport in tightly covered containers.</li> </ol>		<ol style="list-style-type: none"> <li>Do not remove barriers from work area until complete project is inspected by the Safety Dept. and Infection Control Dept. and thoroughly cleaned by EVS Dept.</li> <li>Vacuum work with HEPA filtered vacuums.</li> <li>Wet mop with disinfectant.</li> <li>Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction.</li> <li>Contain construction waste before transport in tightly covered containers.</li> <li>Remove or isolate HVAC system in areas where work is being performed.</li> </ol>			
Additional Requirements:							
Exceptions/Additions to this permit: None							
Safety Officer Approval: <i>Steve Taylor</i>				Date: 2/14/11			
Infection Control Approval: <i>Wesley Kimber RN, CIC</i>				Date: 2/14/11			

**Step Eleven:** Do the plans allow for the required number & type of handwashing sinks?

Yes

**Step Twelve:** Complete Infection Control Construction Permit that designates type of control measures required.

Completed

Completed by

*John J. Smith*      2-14-11  
Safety Officer      Date

*Neicia Kimberlin, CIC*      2/14/11  
Infection Control Nurse      Date