Protocol: Written Safety Plan for Construction			
NCQA Criteria:		**Original Issue/ Effective Date:**	5.18.23
Responsibility	OSHA Director	**Review Dates:**	
Departments Affected:	All	**Revision History:**	

All Contractors are to abide by Family Health's written safety plan. This plan is in place to protect Family Health Employees from harm that could commonly occur during construction; ex: over exposure to dust particles and noxious fumes.

Procedure

All areas of entry into Construction Site are to be marked with caution signs and every effort to decrease injury to Family Health employees shall be maintained at all times by all construction personnel.

All areas of entry/exit are to be wrapped with protective barrier in order to decrease dust exposure

Exits from construction area are to have sticky mats that workers must use to decrease the spread of particles from boots

All areas are to be swept as quickly as possible after destruction of materials which could increase dust particles

All areas should have air purifier's in use, especially when noxious fumes are in use. These areas also need to have safe ventilation in use.

ASHE ICRA 2.0™ Infection Control Risk Assessment and Permit	Project Name:			
	ICRA Number:		Requested by	
Location of Work Activity			Project Start Date	
Estimated Duration			Completion Date	
Foreman/Supervisor			Phone	
Contractor Performing Work			Phone	
Approving Authority			Phone	

Please note that the above signature is approval of the work activity as described and assessed documented here.
Should the scope of work change or the discovery of additional toxic or biological substances.
STOP WORK and seek additional approval and guidance before proceeding.

1. Type of Activity	Explain this reasoning for this assessment
○ Type A: Non-invasive	
○ Type B: Small-scale, short duration	
○ Type C: Large-scale, longer duration	
○ Type D: Major demolition, construction	

2. Patient Risk Area	Describe key patient risks
○ Low: Non-patient care areas	
○ Medium: Patient care support areas	
○ High: Patient care areas	
○ Highest: Invasive, sterile or highly compromised care	

3. Class of Precautions

	Type A	TYPE B	TYPE C	TYPE D
Low	○ I	○ II	○ II	○ III
Medium	○ I	○ II	○ III	○ IV
High	○ I	○ III	○ IV	○ V
Highest	○ III	○ IV	○ V	○ V

4. Surrounding Area

Unit	Below:	Above:	Lateral:	Behind:	In Front:
Risk group					
Contact					
Phone					
Controls	☐ Noise ☐ Vibration ☐ Dust ☐ Ventilation ☐ Pressurization	☐ Noise ☐ Vibration ☐ Dust ☐ Ventilation ☐ Pressurization	☐ Noise ☐ Vibration ☐ Dust ☐ Ventilation ☐ Pressurization	☐ Noise ☐ Vibration ☐ Dust ☐ Ventilation ☐ Pressurization	☐ Noise ☐ Vibration ☐ Dust ☐ Ventilation ☐ Pressurization
Systems impacted:	☐ Data ☐ Mechanical ☐ Med Gas ☐ Hot/Cold Water ☐ Other	☐ Data ☐ Mechanical ☐ Med Gas ☐ Hot/Cold Water ☐ Other	☐ Data ☐ Mechanical ☐ Med Gas ☐ Hot/Cold Water ☐ Other	☐ Data ☐ Mechanical ☐ Med Gas ☐ Hot/Cold Water ☐ Other	☐ Data ☐ Mechanical ☐ Med Gas ☐ Hot/Cold Water ☐ Other

Were there discoveries in surrounding areas that would serve as cause to increase the class of precautions and necessitate additional controls? If so, please summarize.

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5. Detailed Plan of ICRA Controls for this Work	Class I				
Final Class of Precautions being applied	I	II	III	IV	V

Controls required for this project	Specifications/ Materials	Verification method and frequency

Exceptions/Additions to this permit
Date and Initials are noted by attached memoranda

Initials		Date	
Permit Request By		Date	
Permit Authorized By		Date	
Approval Signature			

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Matrix of Precautions for Construction, Renovation and Operations

Step One:
Using Table 1, Identify the Activity Type (A-D).

Table 1 - Activity Type: _____

Type A	**Inspection and non-invasive activities.** Includes but is not limited to: • Removal of ceiling tile for visual inspection-limited to 1 tile per 50 square feet with limited exposure time. • Limited building system maintenance (e.g., pneumatic tube station, HVAC system, fire suppression system, electrical and carpentry work to include painting without sanding) that does not create dust or debris. • Clean plumbing activity limited in nature.
Type B	**Small-scale, short duration activities that create minimal dust and debris.** Includes but is not limited to: • Work conducted above the ceiling (e.g., prolonged inspection or repair of firewalls and barriers, installation of conduit and/or cabling, and access to mechanical and/or electrical chase spaces). • Fan shutdown/startup. • Installation of electrical devices or new flooring that produces minimal dust and debris. • The removal of drywall where minimal dust and debris is created. • Controlled sanding activities (e.g., wet or dry sanding) that produce minimal dust and debris.
Type C	**Large-scale, longer duration activities that create a moderate amount of dust and debris.** Includes but is not limited to: • Removal of preexisting floor covering, walls, casework or other building components. • New drywall placement. • Renovation work in a single room. • Non-existing cable pathway or invasive electrical work above ceilings. • The removal of drywall where a moderate amount of dust and debris is created. • Dry sanding where a moderate amount of dust and debris is created. • Work creating significant vibration and/or noise. • Any activity that cannot be completed in a single work shift.
Type D	**Major demolition and construction activities.** Includes but is not limited to: • Removal or replacement of building system component(s). • Removal/installation of drywall partitions. • Invasive large-scale new building construction. • Renovation work in two or more rooms.

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Matrix of Precautions for Construction, Renovation and Operations

Step Two:

Using Table 2, identify the Patient Risk Group(s) that will be affected. If more than one risk group will be affected, select the higher risk group.

Table 2 - Patient Risk Group: _____

Low Risk Non-patient care areas such as:	Medium Risk Patient care support areas such as:	High Risk Patient care areas such as:	Highest Risk Procedural, invasive, sterile support and highly compromised patient care areas such as:
• Public hallways and gathering areas not on clinical units. • Office areas not on clinical units. • Breakrooms not on clinical units. • Bathrooms or locker rooms not on clinical units. • Mechanical rooms not on clinical units. • EVS closets not on clinical units.	• Waiting areas. • Clinical engineering. • Materials management. • Sterile processing department - dirty side. • Kitchen, cafeteria, gift shop, coffee shop, and food kiosks.	• Patient care rooms and areas • All acute care units • Emergency department • Employee health • Pharmacy - general work zone • Medication rooms and clean utility rooms • Imaging suites: diagnostic imaging • Laboratory.	• All transplant and intensive care units. • All oncology units. • OR theaters and restricted areas. • Procedural suites. • Pharmacy compounding. • Sterile processing department - clean side. • Transfusion services. • Dedicated isolation wards/units. • Imaging suites: invasive imaging.

Step Three:

Match the Patient Risk Group (*Low, Medium, High, Highest*) from Step Two with the planned Construction Activity Project Type (*A, B, C, D*) from Step One using Table 3 to find the Class of Precautions (*I, II, III, IV or V*) or level of infection control activities required. The activities are listed in Table 5 – Minimum Required Infection Control Precautions by Class.

Table 3 - Class of Precautions:_____

Patient Risk Group	Project Type TYPE A	TYPE B	TYPE C	TYPE D
LOW Risk Group	I	II	II	III*
MEDIUM Risk Group	I	II	III*	IV
HIGH Risk Group	I	III	IV	V
HIGHEST Risk Group	III	IV	V	V

Infection control permit and approval will be required when Class of Precautions III (Type C) and all Class of Precautions IV or V are necessary.

Environmental conditions that could affect human health, such as sewage, mold, asbestos, gray water and black water will require Class of Precautions IV for LOW and MEDIUM Risk Groups and Class of Precautions V for HIGH and HIGHEST Risk Groups.

*Type C [Medium Risk groups] and Type D [Low Risk Groups] work areas [Class III precautions] that cannot be sealed and completely isolated from occupied patient care spaces should be elevated to include negative air exhaust requirements as listed in Class IV Precautions.

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Matrix of Precautions for Construction, Renovation and Operations

Step Four:

Assess potential risk to areas surrounding the project. Using Table 4, identify the surrounding areas that will be affected and the type of impact that will occur. If more than one risk group will be affected, select the higher risk group using Table 2 - Patient Risk Group.

Table 4 - Surrounding Area Assessment

Unit Below:	Unit Above:	Unit Lateral:	Unit Behind:	Unit in Front:
Risk Group:	Risk Group:	Risk Group:	Risk Group:	Risk Group:
Contact:	Contact:	Contact:	Contact:	Contact:
Phone:	Phone:	Phone:	Phone:	Phone:
Additional Controls: ☐ Noise ☐ Vibration ☐ Dust control ☐ Ventilation ☐ Pressurization ☐ Vertical Shafts ☐ Elevators/Stairs	**Additional Controls:** ☐ Noise ☐ Vibration ☐ Dust control ☐ Ventilation ☐ Pressurization ☐ Vertical Shafts ☐ Elevators/Stairs	**Additional Controls:** ☐ Noise ☐ Vibration ☐ Dust control ☐ Ventilation ☐ Pressurization ☐ Vertical Shafts ☐ Elevators/Stairs	**Additional Controls:** ☐ Noise ☐ Vibration ☐ Dust control ☐ Ventilation ☐ Pressurization ☐ Vertical Shafts ☐ Elevators/Stairs	**Additional Controls:** ☐ Noise ☐ Vibration ☐ Dust control ☐ Ventilation ☐ Pressurization ☐ Vertical Shafts ☐ Elevators/Stairs
Systems impacted: ☐ Data ☐ Mechanical ☐ Med Gases ☐ Hot/Cold Water	**Systems impacted:** ☐ Data ☐ Mechanical ☐ Med Gases ☐ Hot/Cold Water	**Systems impacted:** ☐ Data ☐ Mechanical ☐ Med Gases ☐ Hot/Cold Water	**Systems impacted:** ☐ Data ☐ Mechanical ☐ Med Gases ☐ Hot/Cold Water	**Systems impacted:** ☐ Data ☐ Mechanical ☐ Med Gases ☐ Hot/Cold Water

Noise & Vibration Mitigation Strategies

- ☐ Use diamond drills instead of powder-actuated fasteners.
- ☐ Schedule noise-making periods with adjacent spaces.
- ☐ Use beam clamps instead of shot.
- ☐ Prefab where possible.
- ☐ Use tin snips to cut metal studs instead of using a chop saw.
- ☐ Install metal decking with vent tabs, then use cellular floor deck hangers.
- ☐ Consider compression style fittings instead of soldering, brazing or welding.
- ☐ Wet core drill instead of dry core or percussion.
- ☐ Instead of jackhammering concrete, use wet diamond saws.
- ☐ Use HEPA vacuums instead of standard wet/dry vacuums.
- ☐ Use mechanical joining system sprinkler fittings instead of threaded.
- ☐ Where fumes are tolerated, use chemical adhesive remover (flooring glue) instead of mechanical.
- ☐ To remove flooring, consider abrasive blasting instead of using a floor scraper.
- ☐ Use electric sheers instead of reciprocating saw for ductwork cutting.
- ☐ Install exterior man/material lifts.

Ventilation & Pressurization Mitigation Strategies

- ☐ HEPA to exterior.
- ☐ Install temporary ductwork.
- ☐ Utilize temporary HVAC equipment.
- ☐ Vacate the area.
- ☐ Install temporary partitions.
- ☐ Use carbon filtration to filter odors.

Impact to Other Systems Mitigation Strategies

- ☐ Schedule outages.
- ☐ Provide temporary systems.
- ☐ Back-feed electricity or medical gases.

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Infection Control Risk Assessment 2.0
Matrix of Precautions for Construction, Renovation and Operations

Table 5 - Minimum Required Infection Control Precautions by Class | Before and During Work Activity

Class of Precautions	Mitigation Activities (Performed Before and During Work Activity)
Class I	1. Perform noninvasive work activity as to not block or interrupt patient care. 2. Perform noninvasive work activities in areas that are not directly occupied with patients. 3. Perform noninvasive work activity in a manner that does not create dust. 4. Immediately replace any displaced ceiling tile before leaving the area and/or at end of noninvasive work activity.
Class II	1. Perform only limited dust work and/or activities designed for basic facilities and engineering work. 2. Perform limited dust and invasive work following standing precautions procedures approved by the organization. 3. This Class of Precautions must never be used for construction or renovation activities.
Class III	1. Provide active means to prevent airborne dust dispersion into the occupied areas. 2. Means for controlling minimal dust dispersion may include hand-held HEPA vacuum devices, polyethylene plastic containment, or isolation of work area by closing room door. 3. Remove or isolate return air diffusers to avoid dust from entering the HVAC system. 4. Remove or isolate the supply air diffusers to avoid positive pressurization of the space, 5. If work area is contained, then it must be neutrally to negatively pressurized at all times. 6. Seal all doors with tape that will not leave residue. 7. Contain all trash and debris in the work area. 8. Nonporous/smooth and cleanable containers (with a hard lid) must be used to transport trash and debris from the construction areas. These containers must be damp-wiped cleaned and free of visible dust/debris before leaving the contained work area. 9. Install an adhesive (dust collection) mat at entrance of contained work area based on facility policy. Adhesive mats must be changed routinely and when visibly soiled. 10. Maintain clean surroundings when area is not contained by damp mopping or HEPA vacuuming surfaces.
Class IV	1. Construct and complete critical barriers meeting NFPA 241 requirements including: Barriers must extend to the ceiling or, if ceiling tile is removed, to the deck above, and all penetrations through the barrier shall meet the appropriate fire rating requirements. 2. All (plastic or hard) barrier construction activities must be completed in a manner that prevents dust release. Plastic barriers must be effectively affixed to ground and ceiling and secure from movement or damage. Apply tape that will not leave a residue to seal gaps between barriers, ceiling or floor. 3. Seal all penetrations in containment barriers, including floors and ceiling, using approved materials (UL schedule firestop if applicable for barrier type). 4. Containment units or environmental containment units (ECUs) approved for Class IV precautions in small areas totally contained by the unit and that has HEPA-filtered exhaust air. 5. Remove or isolate return air diffusers to avoid dust entering the HVAC system. 6. Remove or isolate the supply air diffusers to avoid positive pressurization of the space. 7. Negative airflow pattern must be maintained from the entry point to the anteroom and into the construction area. The airflow must cascade from outside to inside the construction area. The entire construction area must remain negatively pressurized. 8. Maintain negative pressurization of the entire workspace by use of HEPA exhaust air systems directed outdoors. Exhaust discharged directly to the outdoors that is 25 feet or greater from entrances, air intakes and windows does not require HEPA-filtered air. 9. If exhaust is directed indoors, then the system must be HEPA filtered. Prior to start of work, HEPA filtration must be verified by particulate measurement as no less than 99.97% efficiency and must not alter or change airflow/pressure relationships in other areas. 10. Exhaust into shared or recirculating HVAC systems, or other shared exhaust systems (e.g., bathroom exhaust) is not acceptable. 11. Install device on exterior of work containment to continually monitor negative pressurization. To assure proper pressure is continuously maintained, it is recommended that the device(s) have a visual pressure indicator. 12. Contain all trash and debris in the work area.

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	13. Nonporous/smooth and cleanable containers (with a hard lid) must be used to transport trash and debris from the construction areas. These containers must be damp-wiped cleaned and free of visible dust/debris before leaving the contained work area. 14. Worker clothing must be clean and free of visible dust before leaving the work area. HEPA vacuuming of clothing or use of cover suits is acceptable. 15. Workers must wear shoe covers prior to entry into the work area. Shoe covers must be changed prior to exiting the anteroom to the occupied space (non-work area). Damaged shoe covers must be immediately changed. 16. Install an adhesive (dust collection) mat at entrance of contained work area based on facility policy. Adhesive mats must be changed routinely and when visibly soiled. 17. Consider collection of particulate data during work to monitor and ensure that contaminates do not enter the occupied spaces. Routine collection of particulate samples may be used to verify HEPA filtration efficiencies.
Class V	1. Construct and complete critical barriers meeting NFPA 241 requirements including: Barriers must extend to the ceiling, or if ceiling tile is removed, to the deck above, and all penetrations through the barrier shall meet the appropriate fire rating requirements. 2. All (plastic or hard) barrier construction activities must be completed in a manner that prevents dust release. Plastic barriers must be effectively affixed to ground and ceiling and secure from movement or damage. Apply tape that will not leave a residue to seal gaps between barriers, ceiling or floor. 3. Seal all penetrations in containment barriers, anteroom barriers, including floors and ceiling using approved materials (UL schedule firestop if applicable for barrier type). 4. Construct anteroom large enough for equipment staging, cart cleaning, workers. The anteroom must be constructed adjacent to entrance of construction work area. 5. Personnel will be required to wear disposable coveralls at all times during Class V work activities. Disposable coveralls must be removed before leaving the anteroom. 6. Remove or isolate return air diffusers to avoid dust entering the HVAC system. 7. Remove or isolate the supply air diffusers to avoid positive pressurization of the space. 8. Negative airflow pattern must be maintained from the entry point to the anteroom and into the construction area. The airflow must cascade from outside to inside the construction area. The entire construction area must remain negatively pressurized. 9. Maintain negative pressurization of the entire workspace using HEPA exhaust air systems directed outdoors. Exhaust discharged directly to the outdoors that is 25 feet or greater from entrances, air intakes and windows does not require HEPA-filtered air. 10. If exhaust is directed indoors, then the system must be HEPA filtered. Prior to start of work, HEPA filtration must be verified by particulate measurement as no less than 99.97% efficiency and must not alter or change airflow/pressure relationships in other areas. 11. Exhaust into shared or recirculating HVAC systems, or other shared exhaust systems (bathroom exhaust) is <u>not acceptable</u>. 12. Install device on exterior of work containment to continually monitor negative pressurization. To assure proper pressure is continuously maintained, it is recommended that the device(s) have a visual pressure indicator. 13. Contain all trash and debris in the work area. 14. Nonporous/smooth and cleanable containers (with a hard lid) must be used to transport trash and debris from the construction areas. These containers must be damp-wiped cleaned and free of visible dust/debris before leaving the contained work area. 15. Worker clothing must be clean and free of visible dust before leaving the work area anteroom. 16. Workers must wear shoe covers prior to entry into the work area. Shoe covers must be changed prior to exiting the anteroom to the occupied space (non-work area). Damaged shoe covers must be immediately changed. 17. Install an adhesive (dust collection) mat at entrance of contained work area based on facility policy. Adhesive mats must be changed routinely and when visibly soiled. 18. Consider collection of particulate data during work to monitor and ensure that contaminates do not enter the occupied spaces. Routine collection of particulate samples may be used to verify HEPA filtration efficiencies.

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Table 6 - Minimum Required Infection Control Precautions | Upon Completion of Work Activity

Class of Precautions	Mitigation Activities (Performed upon Completion of Work Activity)
Classes I, II and III	Cleaning: 1. Clean work areas including all environmental surfaces, high horizontal surfaces and flooring materials. 2. Check all supply and return air registers for dust accumulation on upper surfaces as well as air diffuser surfaces. HVAC Systems: 1. Remove isolation of HVAC system in areas where work is being performed. Verify that HVAC systems are clean and operational. 2. Verify the HVAC systems meet original airflow and air exchange design specifications.
Classes III, IV and V	Class III (Type C Activities only), IV, and V precautions require inspection and documentation for downgraded ICRA precautions. Construction areas must be inspected by an infection preventionist or designee and engineering representative for discontinuation or downgrading of ICRA precautions. Work Area Cleaning: 1. Clean work areas including all environmental surfaces, high horizontal surfaces and flooring materials. 2. Check all supply and return air registers for dust accumulation on upper surfaces as well as air diffuser surfaces. Removal of Critical Barriers: 1. Critical barriers must remain in place during all work involving drywall removal, creation of dust and activities beyond simple touch-up work. The barrier may NOT be removed until a work area cleaning has been performed. 2. All (plastic or hard) barrier removal activities must be completed in a manner that prevents dust release. Use the following precautions when removing hard barriers: i. Carefully remove screws and painter tape. ii. If dust will be generated during screw removal, use hand-held HEPA vacuum. iii. Drywall cutting is prohibited during removal process. iv. Clean all stud tracks with HEPA vacuum before removing outer hard barrier. v. Use a plastic barrier to enclose area if dust could be generated. Negative Air Requirements: 1. The use of negative air must be designed to remove contaminates from the work area. 2. Negative air devices must remain operational at all times and in place for a period after completion of dust creating activities to remove contaminants from the work area and before removal of critical barriers. HVAC systems: 1. Upon removal of critical barriers, remove isolation of HVAC system in areas where work is being performed. 2. Verify that HVAC systems are clean and operational. 3. Verify the HVAC systems meets original airflow and air exchange design specifications.

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