This Operations and Maintenance (O&M) protocol directs BPM personnel on creating major wall penetrations (>0.5 inch diameter) for any purpose. There is no maximum size limitation associated with this protocol. This procedure is considered a Category II O&M task because it is a planned task to be performed only by DGS staff, DGS contracted vendors, and BOE-hired contractors. This activity constitutes the planned major penetration of walls and other building cavities that should not be accessed by BOE tenant personnel.

Note: *For the purpose of this O&M protocol, a "suspect" location is an area suspected or known to have been historically impacted by flooding/water damage and a record of subsequent investigation and remediation does not exist. BPM E-shop shall be used to detect, test and direct building management staff when mold is suspected/present.*

Category II Major Wall Penetration (> 0.5 inch diameter)
Project Planning
Step 1. • A Maintenance Work Order (MWO) shall be submitted by BOE personnel (or BOE contractor/vendor) requiring the major penetration of a wall. BPM personnel assigned the task of completing the wall penetration shall review the proposed location for the wall penetration(s). If the proposed major penetration will impact a core wall, a column enclosure, or an area known to have been historically subjected to flooding, BPM personnel should suggest an alternate location to the requestor. Efforts shall be made to by-pass areas of known or suspected mold contamination whenever possible. BPM personnel shall use available as-built assessment report(s) and drawings (along with any subsequent water event information, in performing their review.) If mold/water damage information specific to the proposed penetration location cannot be identified by BPM personnel, the BPM E-shop industrial hygienist shall be contacted to assist in identifying and evaluating any other mold information that may be available. • Any areas of fire proofing or gypsum wall board that appear to have been "treated" with a "colored" sealant/encapsulant have been assessed and mitigated for mold that may have been previously present. Efforts should be made to retrieve records of this mitigation activity. • If the proposed major penetration will NOT impact a core wall, a column enclosure, or an area known to have been historically subjected to flooding; with approval of the BPM E-shop industrial hygienist, BPM personnel may proceed with penetration of the wall without any additional preparation. In any case, caution should be taken whenever penetrating any wall and work should immediately cease if the presence of mold is identified.

Project Execution

Step 2.

- Any wall penetration shall be performed after-hours or weekends and/or in an unoccupied and/or isolated area of the building
- For "suspect" major wall penetrations >0.5 inch diameter, the BPM E-shop industrial hygienist shall be contacted to identify and evaluate any mold information that may be available for the area that may be impacted by the major penetration, and establish controls needed for performing the work.
- At a minimum, plastic sheeting shall be used to catch and collect any dust or debris generated during penetration of the wall; if possible, dust and debris shall be captured and collected as it is being generated; powered-equipment used in penetrating the wall shall be equipped with powered dust collection devices equipped with a HEPA filtration system
- Any areas of fireproofing or "stained" gypsum wall board that have been mitigated for mold, shall be marked with an application of a "colored" sealant/encapsulant coating; in accordance with product manufacturers' use guidelines. Discussions with the manufacturer indicate that Foster® Full Defense™ 40-25 is an appropriate product for use as a biocidal coating on fire-proofing and the wall board surfaces commonly found in the building. Foster® Full Defense™ (40-25) is an EPA registered, low-odor, quick setting, water based coating that is formulated for long term fungicidal activity. Its high coverage, breathable coating makes it the ideal product for residential and commercial mold remediation projects. Meets LEED EQ 4.2 Low-Emitting Materials, Paints and Coatings.

Step 3. Penetrating a "Suspect" Wall

- If needed, an authorized mold remediation contractor may work with the BPM E-shop industrial hygienist to define control measures to be used for Major Wall Penetrations (>0.5 inch diameter); the extent of these controls may vary depending on the potential for mold contamination being present.
- Prior to creating the penetration, the BPM remediation contractor may be required to construct a protective containment at the location of the opening and evaluate the extent of any VMG or water-damaged materials with the BPM E-shop industrial hygienist.
- If VMG is present, the protective containment shall be cleaned and then cleared by the BPM E-shop industrial hygienist before returning the space for use by building personnel.

Clearance Criteria.

- Work areas to be cleared should be dry and visually clear of contamination and debris as determined by the project industrial hygienists.
- Each area that is cleaned shall require a minimum of 24-hours of air scrubbing.
- Two (2) outside air samples (one outside the containment, but on the same floor; one at ground level) prior to collection of inside containment samples.

- The number of inside air samples shall be determined by the size of the containment and at the discretion and consensus of the project industrial hygienists; as few as one (1) and no more than five (5).
- Two (2) outside air samples after collection of inside samples (one outside the containment, but on the same floor; one at ground level on opposite side of the building where initial outside sample was collected).
- Criteria for successful air sample clearance:
  - Quantitative spore counts collected inside containment are less than those observed in outside samples.
  - Similar in rank order and distribution
  - Air sample does not contain specific spores of concern that were identified during initial identification of VMG.

Step 5. Project Completion

- Mold-contaminated area(s) identified during the wall penetration process and any mold remediation or mitigation activities performed shall be documented for future reference by other projects requiring access into the same wall or area.