

**ASBESTOS REMEDIATION DESIGN
GREEN MEADOW SCHOOL
5 TIGER DRIVE
MAYNARD, MA**

1.1 DESCRIPTION:

- A. The work includes the complete removal and disposal of ACM listed below. Refer to the attached floor plans for locations.

1.2 BUILDING:

- A. The building will be not occupied during abatement (work to be performed after school hours). However, custodial personnel will be in the school at other locations.
- B. No gas or propane fueled equipment will be allowed inside the building during abatement. Abatement must be performed utilizing electrically powered equipment.
- C. Electrical, HVAC and fire alarm systems will be shut down within the containment areas.

1.3 DESIGNER:

- A. A Commonwealth of Massachusetts licensed Designer Ammar Dieb, Universal Environmental Consultants (AD-900326) Expiring 3/2020.



1.4 AIR MONITORING:

- A. Full time project monitoring including clearance air sampling will be conducted by a Massachusetts licensed Project Monitor.
- B. Phase Contrast Microscopy (PCM) will be used for background and general area air sampling and will be analyzed on-site by a Massachusetts licensed monitor. It is estimated that eight (8) samples will be collected daily.
- C. Transmission Electron Microscopy (TEM) will be used for clearance air sampling and will be analyzed by a Massachusetts licensed laboratory either EMSL or ProScience.

1.5 CONTRACTOR:

- A. All asbestos abatement activities will be performed by a Massachusetts licensed asbestos abatement contractor S&S Environmental.
- B. The asbestos contractor will provide a full-time supervisor with all appropriate state licenses, who is experienced in administration and supervision of asbestos abatement projects including work practices, protective measures for building and personnel, disposal procedures, etc.
- C. The asbestos contractor will post on-site of all current certificates of training and licenses of all workers.

D. The asbestos contractor shall utilize all applicable personal protective equipment.

E. The asbestos contractor shall perform all required OSHA sampling.

1.6 DATES OF ABATEMENT:

A. It is anticipated that asbestos abatement activities will take place starting Tuesday, April 2, 2019 and be completed by Friday, April 19, 2019.

1.7 SCOPE OF WORK:

The scope of work includes the removal of the following ACM:

Room 7B: Ceiling Tiles: 900 SF

Remainder of the wing: Ceiling Tiles: 9,000 SF and approximately 200 Hard Joints.

Quantities **are estimated** and will be verified by the Project Monitor and Supervisor.

1.8 SEQUENCE OF WORK:

A. The three-stage de-contamination unit will have to be erected inside the work area. Therefore, abatement has been divided into 2 work areas per the floor plans. Classroom 7B will be performed first and then the remainder of the wing will be performed.

1.9 PREPARATION OF WORK AREA:

A. All work shall be performed using the full containment method.

B. Install critical barriers with 2-layers of polyethylene sheeting separating the work area from the non-work area on each side of the door.

C. Install one layer of polyethylene sheeting on floor in areas/routes that will be used to transport the waste. Refer to floor plan for recommended routes.

D. Preparation of the work area:

1. Pre-clean the work area using HEPA machines or wet wipe all surfaces and fixed to remain furniture. All fixed non-movable object will be covered with 2 layers of 6 mil poly and sealed to the floor with duct tape or the equivalent. All movable objects will be removed from the work area.
2. Erect 3-stage de-contamination units and load-out chamber (see floor plans for anticipated locations).
3. Seal all critical barriers with 2-layers of polyethylene sheeting.
4. Install polyethylene sheeting on walls as required and as needed.
5. Install negative air machines in the work area as follows:
 - Room 7B: It is estimated that a total of 1 (Average of 30'W x 30'L x 10'H)/15 x 2,000= 1, machine will be needed for the work area based on size.
 - Wing: It is estimated that a total of 3-4 (Average of 80'W x 120'L x 10'H)/15 x 2,000= 3, machine will be needed for the work area based on size.

1.10 REMOVAL OF ASBESTOS CONTAINING MATERIALS:

A. For the removal of ceiling tiles, the following procedures shall be implemented:

1. Remove the ceiling tiles and any rigid insulation that might be found on top.
 2. Remove and dispose of the ceiling grids.
 3. Pick up all waste and place into rigid containers such as drums or double lined bags.
 4. The ACM shall be removed until all visible debris is removed.
 5. Transport the waste to the truck.
 6. Wet wipe all surfaces.
- B. For the removal of hard joint insulation, the following procedures shall be implemented:
1. Protect the fiberglass insulation.
 2. Remove the hard-joint insulation.
 3. Pick up all waste and place into rigid containers such as drums or double lined bags.
 4. The ACM shall be removed until all visible debris is removed.
 5. Transport the waste to the truck.
 6. Wet wipe all surfaces.

1.11 DECONTAMINATION OF WORK AREA:

- A. Remove the first layer of plastic sheets from walls. Take proper care in folding up plastic sheeting to minimize dispersal of residual asbestos containing debris.
- B. Leave the critical barriers sealed. Maintain HEPA filtered negative air pressure systems, air filtration and decontamination enclosure systems in service.
- C. Remove all debris from floor of work area. HEPA vacuum the entire floor.
- D. Following the final visual inspection by the Project Monitor and the Supervisor, apply sealer in accordance with manufacturer's recommendations using airless spray equipment.
- E. Clearance air sampling will then be performed (if clean) by the Project Monitor.

1.12 POST REMEDIATION CLEAN-UP:

- A. Following receipt of clearance air sampling, remove all plastic sheeting layers from walls, etc. and vacuum all surfaces.
- B. Remove any visible debris that might be found when removing the plastic sheeting and wet wipe the area.
- C. Remove the polyethylene sheeting on floor in area/route that will be used to transport the waste and wet wipe.
- D. Remove the decontamination units.

1.13 REFERENCE STANDARDS:

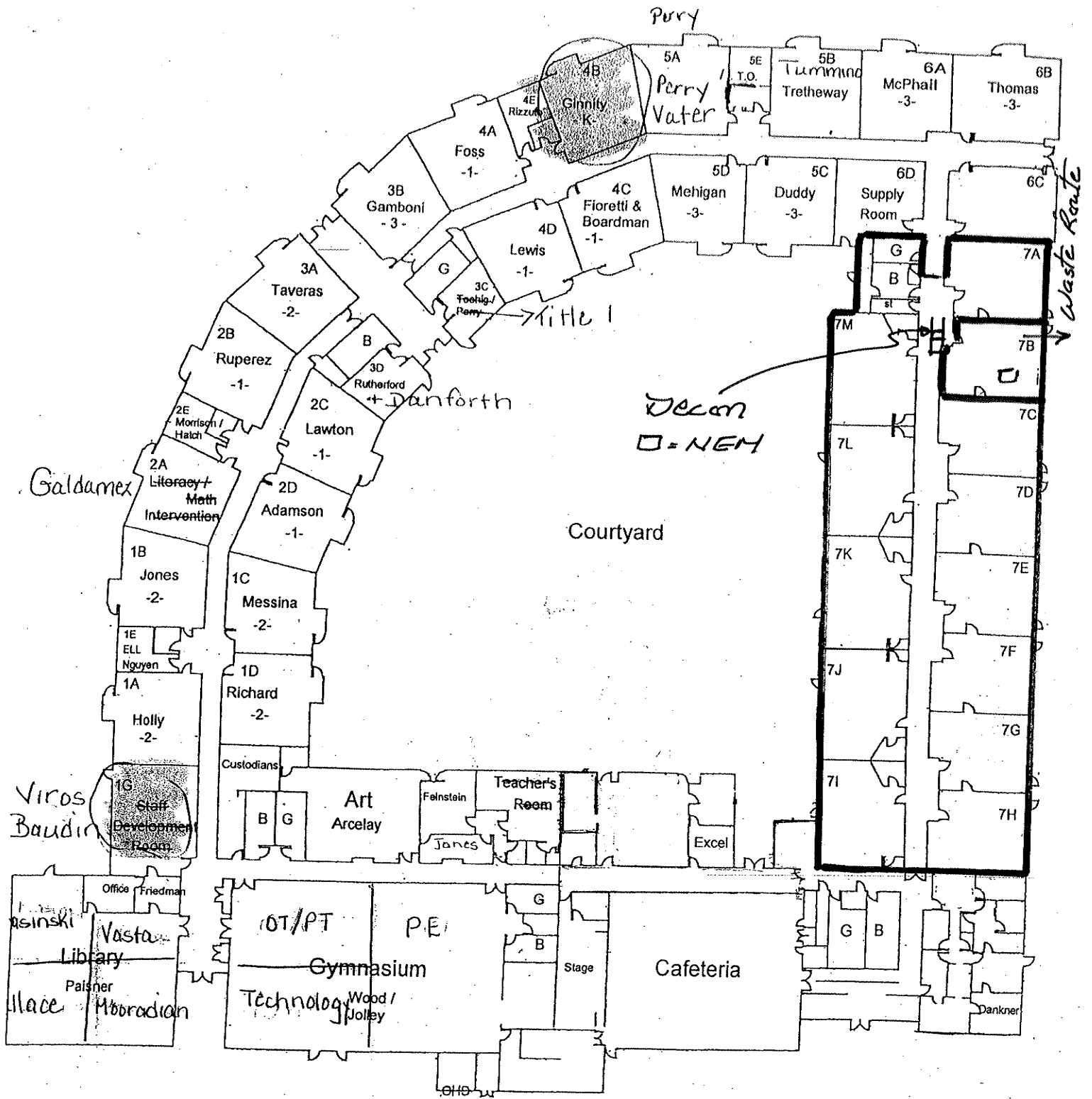
- A. All referenced standards shall be the latest edition available at the time of abatement. Comply with the provisions of the following codes and standards.
- B. U.S. Department of Labor, Occupational Safety and Health Administration, (OSHA) requirements, which govern asbestos abatement work or hauling and disposal of asbestos waste materials.
- C. U.S. Environmental Protection Agency (EPA) requirements, which govern asbestos abatement work or hauling and disposal of asbestos waste materials.

- D. U.S. Department of Environmental Protection (DEP), 310 CMR 7 (Air Pollution Control Regulations, 310 CMR 30 (Hazardous Waste Regulations) and all other relevant DEP regulations.
- E. Massachusetts Department of Labor Standards (DLS).

1.14 DISPOSAL OF ACM AND ASBESTOS CONTAMINATED WASTE:

- A. Comply with 29 CFR 1926.1101.
- B. Comply with 310 CMR 7.
- C. Seal all asbestos and asbestos contaminated waste material with double thickness 6-mil, sealable plastic bags and label the bags.
- D. Transport the bags to the truck or dumpster and clean by HEPA vacuum or wet wipe route used to transport the waste.
- E. Transport the waste to the EPA approved waste disposal site.
- F. Provide Waste Shipment Records upon receipt from the disposal site.

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