

**ASBESTOS REMEDIATION DESIGN
GREATER LOWELL TECHNICAL HIGH SCHOOL
TYNGSBOROUGH, 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 not be occupied during abatement (School's April vacation). However, construction workers will be working at other locations within the building.
- B. The building will have normal heat during abatement.
- C. No gas or propane fueled equipment will be allowed inside the building during abatement. Demolition must be performed utilizing sledge hammers or non-powered equipment.
- D. Electrical, HVAC and fire alarm systems will be shut down within the containment area.

1.3 DESIGNER:

- A. A Commonwealth of Massachusetts licensed Designer Ammar Dieb, Universal Environmental Consultants (AD-900326) Expiring 2/2015.



1.4 AIR MONITORING:

- A. Throughout the entire removal and cleaning operations, full time project monitoring will be conducted by a Massachusetts licensed Project Monitor.
- B. Phase Contrast Microscopy (PCM) will be used for background and general areas air sampling and Transmission Electron Microscopy (TEM) will be used for clearance air sampling. PCM air sampling might be analyzed on-site. TEM will be analyzed by an independent laboratory (EMSL).
- C. Background and general area air sampling will be performed around the work area, by the decontamination unit, waste load out chamber and/or at other locations as needed. It is anticipated that 8-air sampling will be performed per shift.

1.5 CONTRACTOR

- A. All asbestos abatement activities will be performed by a Massachusetts licensed asbestos abatement contractor RM Technologies.
- 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 commence on Tuesday, April 22, 2014 at 7:00AM and be completed by Friday, April 25, 2014.

1.7 SCOPE OF WORK:

A. The scope of work includes the removal of the following ACM:
Transite Panels used on Walls: 600 SF
Fiberglass Batting Insulation: 600 SF

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

1.8 PREPARATION OF WORK AREA:

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

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

C. Preparation of the work area:

1. Pre-clean the area using HEPA machines or wet wipe surfaces and fixed to remain furniture.
2. Erect a 3-stage de-contamination unit and load-out chamber (see floor plan for anticipated location).
3. Seal all critical barriers including lights, etc.
4. Remove shelves to access ACM.
5. Install polyethylene sheeting on walls other than where ACM is found and floor as required and as needed.
6. Cover all remaining furniture with polyethylene sheeting and seal.
7. Install negative air machines in each work area as follows:
 - Negative air units with HEPA filtration shall be used in the area. It is estimated that a total of 2 (Average of 30'W x 80'L x 10'H)/15 x 1,000= 2, machines will be needed for the work area based on size.

1.9 REMOVAL OF ASBESTOS CONTAINING MATERIALS:

A. For the removal of transite panels, the following procedures shall be implemented:

1. Remove all panels intact by unscrewing the panels from the studs.
2. Where there are fixed items found such as fire alarm boxes and wires, carefully cut the panels using wet spray.
3. Remove any possible debris that might be generated or previously found behind the panels.
4. Remove fiberglass batting insulation.
5. Lower the ACM panels and cover with polyethylene sheeting and seal with duct tape.
6. Place all waste in asbestos labeled bags.
7. Transport the waste to the dumpster.

1.10 DECONTAMINATION OF WORK AREA:

A. Leave the critical barriers sealed. Maintain HEPA filtered negative air pressure systems, air filtration and decontamination enclosure systems in service.

- B. Remove all ACM debris from floor of work area. HEPA vacuum the entire floor.
- C. Following the final visual inspection by the Project Monitor and the Supervisor, apply sealer in accordance with manufacturer's recommendations using airless spray equipment.
- D. Clearance air sampling will then be performed (if clean) by the Project Monitor.

1.11 POST REMEDIATION CLEAN-UP:

- A. Following receipt of clearance air sampling, remove all plastic sheeting layers from walls, floorings, 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.

1.12 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).

1.13 DISPOSAL OF ACM AND ASBESTOS CONTAMINATED WASTE

- A. Comply with 29 CFR 1926.1101.
- B. Comply with 310 CMR 7 & 30.
- 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.

3-stage Decorn.

Truck

Waste Route

Work Area

