The City of Waltham

Invites
Interested Parties
To propose the best offer and or bid
For the service or product herewith described:

ASBESTOS REMOVAL AND HYGIENE SERVICES FOR CERTAIN AREAS OF THE FORMER BANKS SCHOOL

The bid opening will be held: Wednesday, November 7, 2012 at 1:00 pm

Pre-Bid Walk-Thru: Tuesday October 30, 2012 at 1:00 pm (meet at 948 Main Street)

Phone: 781-314-3244, Fax: 781-314-3245

Specifications

and

Price Sheet

ASBESTOS ABATEMENT, REMOVAL
and
HYGIENE SERVICES
At the
FORMER BANKS SCHOOL
948 Main Street
WALTHAM, MA

SCOPE OF WORK:

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. The General Provisions of the contract, including General and Supplementary Conditions and applicable provisions of Division 01000 - General Requirements, apply to the work specified within this Section.

B. Examine all conditions as they exist at the project prior to submitting a bid for the work of this Section.

C. All provisions of this Section relating to the health and safety of workers and the general public, as well as protection of the environment are minimum standards. The General Contractor and the asbestos abatement Subcontractor are responsible for determining whether any additional and/or more stringent protective measures are required by any legal requirements or prudent conservative work practices, and implementing such measures if deemed necessary. Nothing in this Section shall be deemed to relieve the General Contractor and the asbestos abatement Subcontractor from any liability with respect to any such legal requirements or requirement of prudent conservative practice.

D. All work-site preparations and practices will be conducted in accordance with all Federal, Massachusetts and appropriate City and other local regulations, standards and codes pertaining to worker health protection, protection of the public health and the environment, including current US Environmental Protection Agency (EPA), Department of Labor Occupational Safety and Health Administration (OSHA), US Department of Transportation (DOT), Massachusetts Division of Occupational Safety (DOS), Massachusetts Department of Environmental Protection (DEP), local and all other Federal, Commonwealth of Massachusetts and local regulations pertaining to asbestos removal, its transportation and disposal.

E. The Consultant will render certain technical services during the Work, including without limitation, the services described at 453 CMR. 6.07 (5) and described within this Section. All services performed by such Representative shall be considered advisory to, and for the sole and exclusive benefit of the Owner. The asbestos abatement Subcontractor acknowledges that the Consultant is an independent contractor of the Owner and agrees that no act or omission by such Consultant, and no communication by said "Consultant", shall be deemed in any manner to alter or modify the terms of this Contract, or to waive any provision hereof, or to bind Owner, unless specifically agreed upon by Owner in a signed written instrument**.**

F. Prior to use of any design, device, material, method of operation, or process covered by letters patent or copyright, the right for such use shall be secured by suitable legal agreement with the patentee or owner of the letters patent or copyright. No arrangement involving letters patent or copyright is acceptable, if subsequent payment for permanent use following completion of the work is required or implied. The contractor shall be responsible for any liability on the part of the Consultant, which may result from violations by the contractor.

G. The Owner has retained ATC Associates Inc. as the Environmental Consultant for the purpose of Project Management during Asbestos Abatement**.**

H. For the purpose of this Section, "*Consultant*" shall refer to ATC Associates Inc., who will act as designated, authorized representatives of the Owner for the purpose of inspecting, monitoring, and testing.

1.02 SUMMARY OF WORK

A. The following is the Scope of Work, at a minimum, required to be performed associated with the renovation of the former Nathaniel Banks Elementary School, 948 Main Street, Waltham, MA under the base bid. Additional work may also be performed if approved by Owner according to the Unit Prices, as described in this Section and elsewhere in this Specification.

B. All Asbestos Abatement work under this Section shall be performed by a contractor holding a current Massachusetts DOS Asbestos Abatement Contractor’s license. Contractor shall furnish all labor, worker training, materials, equipment, and services for the complete and proper removal and disposal of asbestos-containing materials.

1. Removal and disposal of all specified asbestos-containing materials (ACM) and specified non-ACM materials as identified herein. This shall include all asbestos-containing pipe/pipe fitting insulation, floor tile and associated black mastic, sheet flooring and associated mastic, black-coated sinks, internal boiler components, and specified non-ACM where necessary to access asbestos, such as non-asbestos containing flooring. Removal of asbestos-containing flooring materials will include all floor tiles and associated mastic, any asbestos-contaminated flooring paper, contaminated plywood sub-floor, leveling compound, and contaminated hardwood floors.

2. Work area preparations, including pre-cleaning, installation of critical barriers and polyethylene sheeting, construction of decontamination facilities, work area enclosures, sealing, isolation, and other activities as directed by the Owner or Consultant.

3. Installation and operation of HEPA filtration units sufficient to achieve a minimum of four air changes per hour in each containment, and according to the provisions as set forth in this Section.

4. Protection on non-ACM materials and equipment inside of work areas with two layers of polyethylene sheeting.

5. Removal and proper disposal of all asbestos-containing pipe/pipe fitting insulation. Removal will be completed in accordance with Section 3.02 of this Section. The Glove Bag Removal Method, as specified in Section 3.03, may be used at the direction of the Consultant.

6. Removal and proper disposal of all asbestos-containing pipe/pipe fitting insulation in the crawl space. Removal to include a minimum of 3" of soil/dirt, all contaminated fiberglass insulation and all debris throughout the crawl space in accordance with Section 3.02 of this Section.

7. Removal and disposal of all asbestos-containing floor tile, sheet flooring and associated mastic, as specified in accordance with Section 3.02. Alternative methods, such as that specified in Section 3.04, may be used at the direction of the Consultant. Removal and disposal of all non-asbestos-containing materials (e.g., carpeting) to access the floor tile, including but not limited to all existing plywood sub floor. [Refer to Section 1.13 for additional considerations]. Removal of all asbestos-containing and asbestos-contaminated flooring materials will also include all

layers of floor tiles, sheet flooring and associated mastic, flooring paper, leveling compound, and all hardwood floors (noted to be removed or to perform the work) until all asbestos-containing and asbestos-contaminated materials have been removed.

8. Removal of asbestos-containing coated sinks and internal boiler components. All work performed shall be as required by the Section 3.02.

9. Furnishing of all labor, materials, equipment, and services required for all work included under the provisions of this Section.

10. Compliance with all applicable federal, state, and local regulations, as well as all provisions set forth within this Section, and facility requirements.

11. Decontamination and clean up following removal activities in each designated work area. Clean up to include all visible debris from all surfaces present in the work areas.

12. Performance of any other work or activities required by this Section, applicable regulations, or as necessary to perform a complete job to the satisfaction of the Owner and Consultant.

13. Provide temporary electrical wiring and services as required for asbestos removal according to the Provisions as set forth in this Section.

14. Removal and disposal of asbestos-containing materials, and specified non-ACM materials, uncovered during demolition/renovation and not included in the base bid scope of work, in accordance with the Unit Price schedule as set forth in this Specification.

C. Base Bid: The following is the approximate location and quantities of asbestos-containing materials to be removed, under the Base Bid, in accordance with the provisions set forth in this Section:

FORMER NATHANIEL BANKS ELEMENTARY SCHOOL WALTHAM, MA		
Location	**Asbestos-Containing Material**	**Estimated Quantity**
First Floor	Pipe Insulation	1,795 ln ft
	Pipe fitting insulation on fiberglass line	44 each
	9”x 9” green floor tile	900 sq ft
Second Floor	Pipe fitting insulation on fiberglass line	4 each
	Pipe Insulation (assumed concealed inside walls)	100 sq ft

1.03 SEQUENCE OF WORK

A. The following is a typical sequence of work that Contractor shall adhere to during the asbestos abatement project. Consultant may authorize deviations from this typical sequence based upon the specific conditions encountered during the project.

1. Contractor shall post all required signage.

2. Contractor shall secure area from unauthorized access.

3. Owner/Contractor will remove all movable objects from the work area.

4. Contractor shall pre-clean the work area and cover all immovable objects and objects not removed from the work area with two (2) layers of six (6)-mil polyethylene sheeting, sealed airtight with duct tape. Contractor shall install critical barriers at all points of access required by regulations.

5. Contractor shall seal all rooms that do not contain ACM with two layers of six-mil polyethylene sheeting sealed airtight with duct tape.

6. Contractor shall install HEPA filtration units sufficient to achieve a minimum of four (4) air changes per hour. All units shall exhaust to the outside of the building through windows.

7. Contractor shall prepare the specified Work Area for total isolation, VAT and mastic removal, glove bag removal, internal boiler component removal and coated sink removal as described in this Section. Preparation shall include two (2) layers of six (6)-mil polyethylene sheeting, sealed with duct tape, on all floors (if applicable) and non impervious surfaces, including all interior walls.

8. Contractor shall construct decontamination unit, and any other construction needed to complete the work area to the satisfaction of Consultant.

9. Consultant shall inspect and approve all work area preparations before permitting Contractor to begin removal work.

10. Contractor shall construct demising barriers according to the Provisions as set forth in this Section, as deemed necessary and at the direction of the Consultant, if ceiling and wall voids are accessed during abatement activities.

11. Contractor shall remove and dispose all asbestos-containing materials as required by these Sections.

12. Contractor shall decontaminate and clean up each work area upon completion of removal. Clean up shall include the removal of all loose and peeling paint from various surfaces throughout the work area and all paint chips/debris. Clean up of the work area will include the removal of all visible dust and debris from all surfaces in the work area.

13. Consultant shall perform a final visual inspection to assure that no visible debris exist in the work area, including loose and peeling paint or paint chips. Contractor shall re-clean the work areas as needed until they pass a visual inspection by Consultant.

14. Contractor shall encapsulate all surfaces in the work area from which ACM was removed.

15. Consultant will perform final air clearance testing in each work area. Satisfactory results are required before containment may be removed.

16. Contractor shall remove all work area barriers, equipment, polyethylene sheeting, etc. and clean any areas to the satisfaction of Consultant and Owner.

1.04 RELATED WORK SPECIFIED ELSEWHERE

A. Related work specified elsewhere: Examine all Drawings and all other Sections of the Specification for requirements of related sections affecting the work of this Section, including but not limited to:

1. 02070 – Selective Demolition.

2. 02081 – Other Hazardous Material Abatement Protocol.

3. 02090 – Lead Paint Considerations.

B. The work of this section shall be performed as stated herein. In performing the work of this Section, the Contractor shall refer to other Divisions for additional procedures. The Contractor is responsible for the coordination of the work of this section with other related work.

1.05 ESTIMATES

A. Section 1.02 represents a brief description of the estimated quantities of asbestos and asbestos-containing materials to be removed. This data is provided for informational purposes only, and is based on the best information available at the time of specification preparation. Nothing in this section may be interpreted as limiting the scope of work otherwise required by this contract and related documents.

B. The quantities and location of ACM and the extent of work included in this section are only best estimates, which are limited by the physical constraints imposed by occupancy of the buildings. Accordingly, minor variations of plus or minus 15% of the estimated quantities of ACM within the limits of containment for each abatement stage are considered as having no impact on the price of this contract. Where additional asbestos abatement work is required beyond the above variations, the contract price

will be adjusted according to the Unit Price schedule as set forth in this Specification. Additional or reduced abatement work beyond the variations stated will be a basis for adjustment of the contract price according to the Unit Price schedule as set forth in this Specification.

1.06 COORDINATION AND PHASING OF WORK

Contractor shall coordinate all work in this Section with all other work of this Project. Where additional regulatory requirements apply to the work in this Section, the Contractor shall ensure compliance with all requirements.

B. Contractors work schedule must be coordinated with, and acceptable to the General Contractor and approved by the Owner. Contractor shall work continuously and diligently in each work area on the days and during the hours indicated on their work schedule

C. Contractor shall cooperate fully with other Contractors at the facility.

D. Contractor shall subdivide work areas and/or otherwise provide additional containments and mobilization where and when necessary to accomplish asbestos abatement in accordance with the project phasing, as determined by the General Contractor, and as specified by the Owner.

1.07 SUBMITTALS

A. Pre-Construction Meeting

The Contractor shall meet with the Owner and the Consultant for a Pre-Construction meeting prior to commencing work on the project. The meeting shall be at the facility or at the offices of the Owner, at a mutually convenient time and date. At the meeting, the Contractor shall be represented by authorized representatives and the field supervisor who shall run the project on a daily basis, and who shall present evidence that all requirements for initiation of the work have been met. The minimum agenda for the meeting shall be:

1. Review of "Pre-Job Submittals".

2. Channels of communication.

3. Construction schedule, including sequence of critical work.

4. Designation of responsible personnel.

5. Procedures for safety, security, quality control, housekeeping, and related matters.

6. Use of premises, facilities, and utilities.

B. PRE-JOB SUBMITTALS

The Contractor is required to provide one copy of the following Pre-Job Submittals at the Pre-construction Conference:

1. Copies of all notifications, permits, applications, personnel licenses and like documents required by Federal, State, or local regulations obtained or submitted in proper fashion,

2. List of employees to be used on this project.

3. Copies of medical records as required by OSHA or a notarized statement by examining medical doctor that such examinations took place and when for each employee to be used on project,

4. Record of successful respiratory fit test performed by a Competent person (as defined by OSHA) within the previous 6 months, as required elsewhere in the documents for each employee to be used on this project,

5. Certificate of Insurance,

6. Proposed respiratory program for employees throughout all phases of the job, including make, model and NIOSH approval numbers of respirators to be used,

7. Written description of all procedures, methods, or equipment to be utilized by the Contractor that differ from the Contract Sections, including manufacturers Sections on any equipment not specified for use by the Contract Sections,

8. Proposed electrical safeguards to be implemented, including but not limited to location of transformers, GFCI outlets, lighting, etc., necessary to safely perform the job, including a description of an electrical hazards safety plan for common practices in the work area,

9. A list of all equipment to be used on site, by make and model, including negative pressure equipment, HEPA vacuums, Water Atomizing Devices, etc.,

10. Chain of Command of responsibility at work site including supervisors, foreman, and competent person, their names, resumes and certificates of training,

11. Proposed Emergency plan and route of egress from work areas in case of fire or injury, including the name and phone number of nearest medical assistance center,

12. Contractor's testing lab, AIHA PAT proficiency, and Certification in the State where work site is located,

13. Schedule of values breaking down the work in sufficient detail so as to serve as the basis for payment, with disposal costs listed as a separate item.

C. Post-Construction Submittals

The Contractor is required to submit the following to the Consultant within thirty days after completion of the project:

1. Manifests and waste receipts acknowledging disposal of all waste material from the project showing delivery date, quantity, and appropriate signature of landfill's authorized representative,

2. A copy of the entry-exit logbook required elsewhere in these Sections,

3. All personnel monitoring results as required by OSHA and elsewhere in these Sections,

4. Copy of licenses, medical, and fit tests of all workers and supervisors who performed work on the project,

5. All notifications as required elsewhere in these Sections.

1.08 REFERENCE STANDARDS, REGULATIONS AND CODES

All work shall be performed strictly according to the Sections contained herein and with the regulations cited in this Article. The Contractor undertaking asbestos abatement work and persons in their employ shall comply with and be bound to requirements of the following Federal, State, and Local standards, regulations and codes. These standards and codes shall be by reference made part of this Section and shall be complied with. Whenever regulations are conflicting, the more stringent regulation will prevail.

1. US Department of Labor; Occupational Safety and Health Act of 1970. (Particular attention is drawn to the Asbestos Regulations: CFR Title 29, Part 1910, Sec. 1910.1001 and Part 1926, Sec. 1926.1101, and the Respirator Regulations; CFR Title 29, Part 1910, Sec. 1910.134 and the Hazard Communication Program, CFR Title 29, Part 1910.1200).

2. US Environmental Protection Agency, CFR, Title 40, Part 61, Subparts A and M, National Emission Standards for Hazardous Air Pollutants; Asbestos NESHAP Revision; Final Rule, Dated Tuesday, November 20, 1990.

3. US Environmental Protection Agency; TSCA Title II, Asbestos Hazard and Emergency Response Act (AHERA), 40 CFR Part 763 Subpart E - "Asbestos-Containing Materials in Schools" and also 40 CFR, Part 763, Subpart G - "Worker Protection Rule".

4. US Department of Transportation regulations, 49 CFR Parts 172 and 173.

5. All Commonwealth of Massachusetts laws, regulations and standards, including the regulations 453 CMR 6.00 "The Removal, Containment or Encapsulation of Asbestos" and 310 CMR 7.15 "Asbestos", 18.00 and 19.00 and MGL Chapter 21E.

6. Other Federal, State and local statutes, ordinances, regulations, or rules pertaining to this Section and the work described herein, including the storage, transportation and disposal of asbestos.

B. All regulations by these and other governing agencies in their most recent version are applicable. These Sections refer to many requirements found in these references, but in no way intend to cite or reiterate all provisions therein or elsewhere. It is the contractor's responsibility to know, understand, and abide by all such regulations and common practices. Other provisions contained in these references may from time to time during the execution of this contract be enforced by the Owner at his own discretion.

1.09 REGULATORY SUBMITTALS

A. The Contractor shall be responsible for securing all necessary permits for asbestos related work, including hauling, removal, and disposal, fire, and materials usage, or any other permits required to perform the specified work.

B. The Contractor shall notify the following agencies in appropriate manner and place of impending work, and shall provide evidence of notifications at the pre-construction conference:

1. U.S. Environmental Protection Agency,
J. F. Kennedy Federal Building
Boston, Massachusetts 02203
(10 working days in advance)

2. Massachusetts Department of Environmental Protection
Division of Air and Hazardous Materials
(10 working days in advance)
Send Notification to:
Commonwealth of Massachusetts
Asbestos Program
P.O. Box 120087
Boston, Massachusetts 02112-0087

3. Massachusetts Division of Occupational Safety
Asbestos Control Unit
(10 working days in advance)

4. Waltham Fire Department, Waltham Public Health Commission Environmental Health Office, and other state or city agencies as required by law or ordinance.

1.10 PROJECT CONDITIONS

A. Take all measures and provide all material necessary for protecting fixed machinery, controls, instrumentation, equipment, and furniture from asbestos fiber, dust and debris and from water damage.

B. Working space and space available for storing materials is restricted within the confines of the project and/or at locations to be designated by the Owner.

C. Provide access and personal protective equipment, including full face piece powered air-purifying respirators, to the Consultants, who are licensed and certified, to visit the Work Areas to maintain and adjust building services.

D. Schedule the use of existing utilities with the Owner. No utility service, fire protection system, or communication system may be interrupted without prior approval of the Owner.

E. Water, electric power, lighting and other utilities, toilets, and other facilities, shall be provided by the Owner from existing sources where Contractor's use is not excessive and does not interfere with buildings normal use. Where existing utilities of the facility are not adequate or cannot be used, the Contractor is responsible for providing alternative sources, the cost of which is to be included in bid price. The use of the Facility's utilities shall be coordinated through the Owner.

F. Post and affix caution signs and labels as required by OSHA regulation, 29.CFR.1926.1101 (k) (1). Post safety signs outside the work project as may be required by the Owner. Obtain two copies of 29.CFR.1910.1001, 29.CFR.1926.1101, m 40.CFR.61, Subpart M, and Commonwealth of Massachusetts

Regulations 453 CMR 6.00 and 310 CMR 7.00, and post one copy at the job site and retain one copy on file.

G. Post at the job site, or at the entrance to each independent Work Area, one copy of all Material Safety Data Sheets (MSDS's) of all chemicals and other substances to be used on this contract. These sheets shall be made available to the Consultant for review.

H. No storage of waste will be permitted onsite. All ACM shall be removed off-site at the end of each shift except that limited storage space may be provided by the Owner at the facility. Contractor will supply any additional temporary storage as needed. All materials and equipment are to be kept in orderly fashion in designated areas, free and clear of halls and doorways, and in conformance with all regulations, codes, and in consideration of building usage.

1.11 RESPIRATORS AND PROTECTIVE CLOTHING

A. Personal protection, in the form of disposable Tyvek suits, and NIOSH approved respirators, are required for mechanics, contractor supervision, Consultant and visitors at the work site during the set-up, removal, and cleaning operations. Contractor shall provide all this protective equipment for workers, Consultant, and authorized personnel to access this work site.

B. Each worker shall be supplied with a minimum of two complete disposable uniforms everyday. Removal workers shall not be limited to two uniforms, and the Contractor will be required to supply additional uniforms as is necessary. Under no circumstances will anyone entering the removal area be allowed to reuse a contaminated uniform.

C. Work clothes shall consist of disposable full body suits, head covers, gloves, footwear, and eye protection.

D. The Contractor shall supply workers and supervisory personnel with NIOSH approved protective respirators and HEPA/filters. Appropriate respirator selection shall be determined by the daily personnel samples being taken and strictly follow the guidelines set forth in the OSHA respiratory program 29 CFR 1910.134 and the Massachusetts DOS Regulations 453 CMR 6.00. The respirators shall be sanitized and

maintained according to the manufacturer's Sections. Appropriate respirators shall be selected using the information provided in OSHA Title 29 CFR Part 1910.1926 Final Rules. This determination has been made for this project. PAPR's shall be supplied by the contractor for all personnel associated with this work. Disposable respirators shall not be considered acceptable in any circumstance. The Contractor will maintain on site a sufficient supply of disposable HEPA/filters to allow workers and supervisory personnel to change contaminated filters at least three (3) times daily. The Contractor is solely responsible for means and methods used and for compliance with applicable regulations.

E. Respirators shall be individually assigned to removal workers for their exclusive use. All respiratory protection shall be provided to workers in accordance with the written submitted respiratory protection program, which includes all items in OSHA 29 CFR 1910.134 (b) (1-11). A copy of this program shall be kept at the work-site, and shall be posted in the Clean Room of the Decontamination Unit.

F. Workers must perform negative and positive pressure fit tests each time a respirator is put on, whenever the respirator design so permits. Powered air purifying respirators shall be tested for adequate flow as specified by the manufacturer.

G. Workers shall be given a qualitative fit test in accordance with procedures detailed in the OSHA Lead Standard (29 CFR 1910.1025, Appendix D, Qualitative Fit Test Protocols) for all respirators to be used on this abatement project. An appropriately administered quantitative fit test may be substituted for the qualitative fit test.

H. Upon leaving the active work area, pre-filters shall be discarded, cartridges removed, and respirators cleaned in disinfectant solution and clean water rinse. Clean respirators shall be stored in plastic bags when not in use. The contractor shall inspect respirators daily for broken, missing, or damaged parts.

I. Contractor shall provide daily personal sampling to check personal exposure levels for the purpose of establishing respiratory protection needs. Samples shall be taken for the duration of the work shift or for eight hours, whichever is less. Personal samples need not be taken every day after the first day if working conditions remain invariant, but must be taken every time there is a change in the removal operation, either in terms of the location or the type of work. Sampling will be to determine eight-hour Time-

Weighted-Averages (TWA). The contractor is responsible for personal sampling as outlined in OSHA Standard 1926.1001.

J. Sampling personnel shall be proficient in the taking of air samples under NIOSH 7400, and must be supervised by an individual who has completed the training course NIOSH 582 or equivalent.

K. Air sampling results shall be available at the job site in written form no more than twenty-four (24) hours after the completion of a sampling cycle. The document shall list each sample's result, sampling time and date, person monitored, flow rate, sample duration, microscope field area, number of fibers per fields counted, cassette size and analysts name and company. Air sample analysis results will be reported in fibers per cubic centimeter.

1.12 WATER AND ELECTRICAL SERVICE

A. The Contractor shall provide temporary connections to existing building utilities and provide temporary facilities as required and necessary to carry out the work.

B. The Contractor shall provide temporary connections to building water service and provide all lines necessary for distribution of water.

C. Comply with applicable NEMA, NECA and UL standards and governing regulations for materials and layout of temporary electrical service. All power connections and panel work is to be performed by a licensed electrician.

D. The Contractor shall provide temporary service connections from power sources as required. All existing power service to the work area will be isolated and shut down for the duration of the project. Contractor shall provide service (sub-panel) with a minimum of 100 amp, two-pole circuit breaker or fused disconnect. Sub-panel and disconnect shall be sized and equipped to accommodate all electrical equipment required for completion. Contractor's electricians will make all necessary connections to main power system.

E. Provide I.D. warning signs at power outlets that are other than 110-120 volt power. Provide polarized outlets for plug-in type outlets, to prevent insertion of 110-120 volt plugs into higher voltage outlets.

F. Provide all receptacle outlets equipped with ground fault circuit interrupters (GFCI) and reset button for plug-in connection of equipment.

G. The Contractor must supply temporary lighting for all lighting requirements within contained areas. All existing lighting shall be isolated and shut down.

1.13 SPECIAL CONSIDERATIONS

A. Final Air Clearance Tests

1. All final air tests will be performed in accordance with Massachusetts Division of Occupational Safety (DOS) regulations at 453 CMR 6.00, this Section, and other applicable Rulings (i.e., AHERA). The first set of final clearance air tests for each removal area will be paid for by Owner. In the event that these air tests do not pass the clearance criteria, any subsequent air tests that need to be performed shall be paid for by Contractor. All additional sampling costs will be automatically deducted from the contract price until the areas in question pass the final air clearance criteria of less than 0.010 fibers per cubic centimeter for PCM clearance testing or an average of 70 structures per square millimeter for TEM clearance testing.

B. Exceptions to Work Area Preparation Requirements

1. In accordance with 453 CMR 6.14 (2) (a) (7), it will not be required to cover impervious surfaces of walls or floors with two (2) layers of polyethylene sheeting. Examples of such surfaces that may be considered to be impervious include concrete floors without any cracks or fissures and glazed walls, i.e., painted brick walls. (Note: Wooden surfaces and surfaces constructed of stone/cement are not considered impervious). If Contractor wishes to utilize this exception, Contractor shall be required to state on their DOS notification forms that they do not intend to use two (2) layer of polyethylene sheeting for these particular surfaces. If the DOS

does not permit this exception, Contractor shall be required to use two (2) layers of polyethylene sheeting in full accordance with the work area preparation requirements of this Section, and will not be entitled to any additional monies of payment.

PART 2 - PRODUCTS

2.01 ASBESTOS ABATEMENT SUPPLIES

Respirators: Respirators will be selected from those jointly approved by the National Institute for Occupational Safety and Health (NIOSH), US Department of Health and Human Services and the Mine Safety and Health Administration (MSHA), US Department of Labor.

B. Surfactant (Amended Water): All water to be used for removal and wet wiping of asbestos-contaminated materials during clean-up operations shall be amended through the addition of a surfactant (a 50/50 mixture of polyoxyethylene ether and polyoxyethylene ester, or equivalent) mixed and supplied in accordance with manufacturer's instructions.

C. Sealer: All surfaces from which asbestos-containing materials have been removed shall be sealed with a colored-asbestos sealer, mixed and applied in accordance with manufacturer's instructions. The proposed brand and product shall be submitted to the Consultant for approval.

D. Polyethylene Sheeting: All polyethylene sheeting used on the Project shall be fire resistant, and shall meet and be approved as called for in local, Fire Prevention Codes

E. Encapsulant: a bridging encapsulant such as Childer's Product Co., Chilcare CP215 bridging encasement/encapsulant; Barrier Systems Inc., Slaytex Asbestos Encasement System; CRSI/ISP Guardian Bridging encapsulant; IPC Serpiflex shield encapsulant; or equivalent shall be used. The proposed brand and product shall be submitted to the Consultant for approval.

F. Plaster impregnated glass-fiber cloth.

G. Mastic Remover - Sentinel 747, or approved equal.

PART 3 - EXECUTION

3.01 GENERAL

A. Approvals and Inspection

1. All temporary facilities, work procedures, equipment, materials, services, and agreements must strictly adhere to and meet these contract Sections along with EPA, OSHA, NIOSH, regulations and recommendations as well as any other federal, state, and local regulations. Where there exists overlap of these regulations, the most stringent one applies. All work performed by the Contractor is further subject to approval of the Owner.

2. Modifications to these isolation and sealing methods, procedures, and design may be considered if all elements of proper and safe procedures to prevent contamination and exposure can be demonstrated. Written modifications to these Sections must be made to the Owner for review before they can be used for work on this project.

B. Damage and Repairs to the Work Site

1. Asbestos removal and disposal shall be performed without damage to the building, including, but not limited to, structural members, ceilings, walls, pipes, duct work, insulation, light fixtures, public address speakers, sprinklers, and heat and smoke sensors. Contractor shall provide protection of these items and materials as part of the work area preparation. Where asbestos abatement activity causes damage, the Contractor shall patch, repair, replace or otherwise restore it to its original condition at no additional cost to the Owner.

C. HVAC Systems

1. All duct work, heating units and HVAC equipment shall be wrapped in two layers of six-mil polyethylene prior to any other work taking place, or excluded from work area boundaries by airtight polyethylene sheeting.

D. Barriers and Isolation Areas

1. The Contractor shall construct and maintain suitable critical barriers within the building to separate work areas from spaces occupied by the Owner. Critical barriers shall be of sufficient size and strength to prevent staff, residents, the public and others from entering the work areas. Critical barriers shall be constructed at all hallways, doorways, grille openings, or other open entrances to the work area. Critical barriers shall be constructed with plywood and 2 x 4 lumber, reinforcing it, and placed in the locations specified and designated by the Owner's Representative. Any seams in the critical barriers shall be sealed airtight with caulking or an approved equal method. These barriers shall be removed by the Contractor at the completion of construction work.

2. Warning signs shall be posted on all critical barriers at the commencement of the work area preparation, as required in 1926.1101 of the Occupational Safety and Health Standards Federal Register, Volume 51, Number 119, June 20, 1986. The signs shall display the proper legend in the lower panel, with letter sizes and styles of a visibility at least equal to that specified in OSHA Standard 1926.1101. (k)(1)(ii). The signs will read as follows:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATOR AND PROTECTIVE CLOTHING
REQUIRED IN THIS AREA

3. The signs shall be posted at the perimeters of asbestos removal, demolition or construction areas where the asbestos-containing material to be removed exists.

4. The Contractor shall maintain all temporary and critical barriers, facilities and controls as long as needed for the safe and proper completion of the work. Any breaches in the containment will be corrected at the beginning of each shift and as necessary during the

workday. Work will not be allowed to commence until all control systems are in place and operable.

5. No barriers shall be removed until the work areas are thoroughly cleaned and all debris has been properly bagged and removed from work areas, and the air has passed final clearance tests, in accordance with provisions detailed herein.

3.02 ACM LOCATION PREPARATION AND REMOVAL

A. Preparation

1. Primary Barriers: Prior to construction of the asbestos removal area, all primary barriers shall be sealed with a minimum of one layer of six (6) mil plastic sheeting and duct tape. Primary barriers consist of all windows, vents, closed and locked doors, and openings to adjacent spaces from the work area. HVAC systems shall be sealed, where applicable, as described previously with two layers of 6 mil polyethylene sheeting.

2. Critical Barriers: Critical barriers consist of the boundaries of the work area including floors, walls, and any constructed barrier to restrict public access to the work area. Floors, if applicable, shall be sealed with a minimum of two layers of six (6) mil polyethylene sheeting. There shall be a minimum overlap of two feet (24") at the floor seams and the sheeting will run a minimum of two feet (24") up the walls.

3. The containment walls shall be constructed using a minimum of two layers of six mil. polyethylene sheeting after sealing the floors. This shall be done using a minimum of one layer of six mil. polyethylene sheeting. Overlaps between the walls and floors shall be interwoven.

4. The first floor layer shall be taped up the wall a minimum of two feet (24"). The first wall layer shall be sealed to the floor layer at the corner of the floor and wall. The second floor layer shall be sealed to the first wall layer at a minimum of a two foot (24") overlap. The second wall layer shall cover all overlaps and be sealed to the floor.

5. The enclosure shall be constructed so as to allow the removal of interior layers of plastic without damaging the exterior layer. The exterior layer shall stay intact for the duration of the project and be designated the critical barrier.

B. Decontamination Unit and Procedures

1. It is the Contractor's responsibility to provide decontamination chambers consisting of an Equipment Room, Shower, and Clean Room for personnel involved in asbestos removal. Each of the three rooms shall be of sufficient size to accommodate authorized personnel and related equipment. Each room shall be separate of other rooms by a double flap of 6 mil polyethylene sheeting acting as an airlock. This shall be designed to minimize fiber migration and air flow between the decontamination unit rooms. The rooms shall be framed with 2"x 4" lumber, masked, sealed and attached to the entry/exit ways of asbestos work areas. The three rooms together shall be referred to as the Decontamination Unit. A Decontamination Unit will be required for each separate containment area, if work is to be divided into sections.

2. The Equipment Room shall serve as a transfer room and an intermediate area between the work area and any decontamination procedures to occur in the shower room. This room shall be vacuumed and washed whenever necessary in order to prevent asbestos dust and debris accumulations or when required by Consultant. The Equipment Room will also serve as an access area to the shower for personnel leaving the work area. Workers leaving the containment shall remove and dispose of disposable protective suits and wear only respirators into the Shower. At the end of each day, bags of asbestos waste and contaminated materials shall be removed after a thorough decontamination procedure as described in the contract Sections. Workers performing this operation will wear respirators and disposable full-body protective suits.

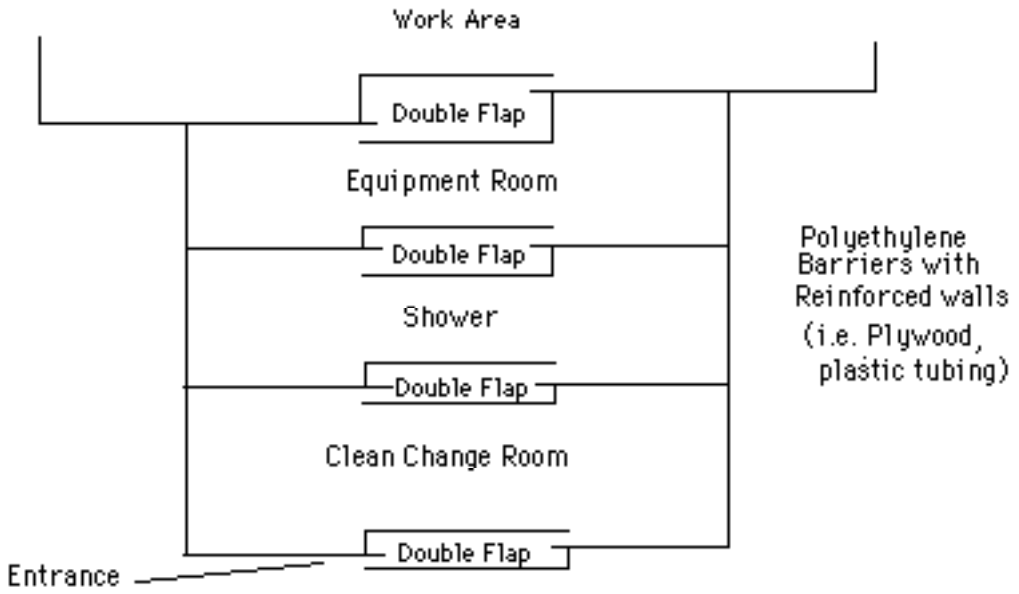
2. The Shower Room shall have a continuous supply of cold and hot water, and be suitably arranged for complete showering during decontamination. The Shower Room with curtained doorways will comprise an airlock between contaminated and clean areas.

3. All materials being passed from the equipment room to the clean room must pass through the shower and be thoroughly decontaminated. The shower floor will not be allowed to sit at ground level, but must be elevated a minimum of six inches off of the floor with a suitable catch basin for drainage into a filtration system.

4. The shower will be equipped with a sump pump and an in-line two stage filter. The first stage will efficiently filter fibers greater than twenty (20) microns in length and the second stage will filter bulk material and fibers greater than five (5) microns in length. Alternatively, shower water may be re-routed back into the work area to be bagged and disposed of as asbestos contaminated waste. The Contractor shall provide disposable towels and soap in the shower area.

5. The Clean Room shall store asbestos worker's clean protective clothing and clean respirator equipment. Contaminated clothing, respirators, tools, equipment, or other materials shall not be allowed into the Clean Room or beyond. The Clean Room will serve as an access for personnel entering the work area, and for the donning of respiratory protection and protective clothing. The contractor shall provide space in the clean room for the worker's personal clothing. This may be in the form of hangers or lockers.

TYPICAL DECONTAMINATION UNIT



6. The above decontamination enclosure is called a "three-stage" decontamination enclosure and shall be the type constructed and used for this project in specified areas. A "two stage" unit resembles the "three-stage" unit in construction detail, but it is built without a shower section.

C. HEPA Filtration: Adequate negative pressure shall be provided within the enclosure as specified below.

1. After the work area is totally isolated, and prior to commencement of work, the Consultant will perform a visual inspection of the work area. This will consist of checking the integrity of barriers including smoke testing the containment if deemed necessary by Consultant. This does not in any way relieve the Contractor's responsibilities to ensure the isolation of the work area. The volume of air within the contained work area shall be changed a minimum of four (4) times per hour. A pressure differential reading of 0.02 inches of water shall be maintained in the negative pressure work area relative to adjacent areas. Equipment used for producing a negative pressure work area shall have a filtering device that is at least 99.97% efficient at a 0.3 micron pore size. Filters meeting these standards are referred to as High Efficiency Particulate Air (HEPA) filters.

2. The HEPA filtration units shall be equipped with the following:

a. Magnehelic gauge to monitor the unit's air pressure difference across the filters and be able to interpret magnehelic reading to cubic feet per minute (CPM).

b. An affixed label, clearly marked and conspicuous, showing the most recent installation date and hour reading of the primary internal HEPA

c. A clock to record the unit's operation time.

d. Automatic shut off for filter failure or absence.

e. Audible alarm for unit shutdown.

f. Amber flashing warning light for filter loading.

g. The unit must be equipped with a safety system which prevents it from being operated with the HEPA filter in an improper orientation.

h. All flexible ducting, vent tubing, adapter plates and other equipment used for the passage of filtered air shall be undamaged, uncontaminated, and free of air leaks at all points.

3. Pre-filters shall be changed frequently during the removal.

4. Air movement will flow uninterrupted from outside the work area through the Decontamination Unit into the work area. There shall be no other openings for air to enter the containment unless approved by the Consultant in writing.

5. HEPA filtration units shall be placed as far as possible from the air intake to the containment to prevent short-cycling of fresh air.

6. This containment, along with the decontamination chamber, shall constitute the critical containment of the work area from the surrounding areas. All openings to this critical containment are to be sealed except where air must enter the work-site due to the use of exhaust equipment. Unless approved by the Owner, air shall enter the critical containment only through the Decontamination Unit.

7. Modifications to these isolation and sealing methods, procedures, and design may be considered if all elements of proper and safe procedures to prevent contamination and exposure can be demonstrated. Written modifications to these Sections must be made to the Owner for review before they can be used for work on this project.

D. ACM Removal

1. Asbestos removal will not begin until the Consultant has given authorization to proceed. This authorization will be given after the removal area has passed a visual inspection by the Consultant based on the criteria presented herein.

2. All asbestos-containing material must be soaked with amended water before removal. The material shall be sufficiently saturated to reduce fiber release so that the airborne fiber concentration does not exceed the established OSHA Permissible Exposure Limits, (PEL's). The amended water shall not be applied in amounts that will cause leakage or runoff of contaminated water from the removal area. Dry removal will not be permitted during this project.

3. Asbestos-containing material shall be carefully removed and placed immediately into bags. Bags must be filled with water to the point where all asbestos is adequately wetted as defined by Federal Regulations 40 CFR 61 Subpart M. Asbestos will not be permitted to let fall or sit on the ground before being bagged.

4. Fine cleaning of residual asbestos-containing material shall consist of carefully scraping or brushing the material from surfaces. The recommended method for brushing a substrate after gross removal has taken place is to use a nylon brush. Wetting of the substrate shall also occur

while this brushing is performed, since the chance of airborne fiber generation during fine cleaning still exists.

5. Water Atomizing Devices, commonly termed "misters," shall be utilized by the contractor during asbestos removal and fine cleaning phases to provide further dust control protection in the work area. The misters shall be supplied with amended water and in operation continuously during these phases.

6. Asbestos waste must be double bagged before it is removed from the contained area. The inner bag will be HEPA vacuumed and showered before being placed in the outer bag. Vacuuming must take place in the Equipment Room of the Decontamination Unit. Washing must take place in the Shower Room of the Decontamination Unit. Bags will normally be removed at the end of each working day and transported from the job site.

7. Any materials considered contaminated by the Owner or the Owner's representative that cannot be double bagged shall be wetted and containerized in disposal drums. Oversized contaminated materials (e.g., plywood subfloor, hardwood floors) shall be wrapped airtight in two layers of 6 mil polyethylene sheeting.

8. All bags, containers or wrapped materials transported out of the work area shall be labeled with preprinted labels required by Federal EPA, OSHA and the Department of Transportation regulations. Any carts used to transport asbestos waste to the on-site holding dumpster should be HEPA vacuumed and wet wiped each day, and may be inspected by the Owner or Consultant every day.

9. Carts that are not made of an impermeable material shall be lined with a minimum of one layer of 6 mil polyethylene sheeting to be removed after each shift and disposed of as contaminated waste. The transport route and the transport of waste out of the work area shall be coordinated with the on site Owner's representative.

10. The work area shall be cleaned of residual asbestos debris on a daily basis. The Decontamination Unit floor (top layer) shall be picked up and replaced on a daily basis, if required by Consultant.

11. Air testing will be performed continuously outside the enclosed area. If fiber concentrations exceed 0.010 fibers/cc or background levels, work shall stop and the Contractor shall perform clean up activities in the affected areas and check the integrity of the critical barriers. Clean up activities shall include but not be limited to wet wiping and vacuuming surfaces with a HEPA equipped vacuum. Work may continue only after the source of contamination is identified, corrected and proper cleaning activities are implemented. Air testing will be performed by the Consultant on site in the affected areas. If the results of these air tests are not below 0.010 fibers/cc, the Contractor shall perform a thorough decontamination of the affected areas.

12. After brushing and scraping, surfaces shall be free of visible debris and fibers. A final wipe-down of the substrate with wet, lint-free rags shall take place in order to ensure proper cleaning. All surfaces including floors, walls, and ceilings shall also be HEPA vacuumed clean. All visible asbestos-containing material is to be removed by the Contractor before encapsulation procedures are allowed to begin. The Consultant will perform an inspection of the work area prior to giving approval to begin encapsulation of work area. Removal substrate must be clean and bare, and the entire work area must be free and clear of any suspect material for the contractor to pass this visual inspection and begin encapsulation.

13. Where insulated substrates penetrate walls or other demising structures, remove asbestos through to the opposite side of the demising structure. After the removal of the asbestos materials at the demising structures, any resulting spaces or breeches shall be foamed or sealed airtight.

E. Removal of Critical Barriers

1. No critical barrier shall be taken down until the final visual inspection and final clearance air tests are found to below 0.010 fibers/cc.

2. After a successful final visual inspection, encapsulation, and a successful final air test, Contractor shall perform post abatement take-down.

3. All encapsulated polyethylene sheeting used in the construction of the Decontamination Unit and Containment Area shall be bagged and disposed of as asbestos contaminated waste. Areas exposed during this process shall be examined for traces of suspect material. If any is found, it will be picked up by HEPA vacuuming and wet cleaning, and a coat of encapsulant be applied to the affected areas. Based on the amount of suspect material found, the Consultant may request the use of misters in the surrounding area. The Contractor will then implement the use of misters as a precautionary measure.

F. Encapsulation Procedures

1. The polyethylene barriers shall be cleaned of gross contamination before a lock-down sealant can be applied to the substrate. After the substrate has been cleaned and all polyethylene barriers of the work area are cleaned of all visible debris, the Contractor shall request a visual inspection of the work area by the Consultant. Prior to the inspection of the work area, the Contractor shall remove the inside layer of the work area polyethylene sheeting, after cleaning, and dispose of it as contaminated waste. The work area will still have all primary barriers intact and one layer of polyethylene sheeting over floor, walls, and permanent structures within the work area during the inspection.

2. Workers performing lock-down must wear disposable protective clothing and respirators suitable for asbestos. The encapsulation process shall not be treated any differently from the removal process in this respect.

3. The lock-down material shall be applied with a low pressure (less than 500 p.s.i.), airless spray-type mechanism.

4. All surfaces in the work area will be encapsulated. A minimum of one coat of lock-down encapsulant will be applied to prevent the generation of airborne residual fibers. The lock-down

encapsulant will be applied to both the substrate and the polyethylene sheeting serving as the containment barrier. During the encapsulation process, the Contractor shall decrease the negative pressure of the work area by shutting down some of the air filtration devices in the work area. If the lock-down material is being applied to irregular, grooved, or corrugated surfaces, it shall be administered from the opposing side, or at a right angle to the direction of the previous application. The encapsulant shall be left to dry before the commencement of final air testing. After final air clearance and inspection criteria have been met, the Contractor shall begin final take-down procedures.

3.03 GLOVE BAG REMOVAL METHOD

A. Removal of asbestos containing pipe and pipe fitting insulation shall be in accordance with the following procedure:

1. Glove bags may be used as a method of asbestos removal as an alternative to total isolation removal or in conjunction with total isolation removal in areas identified in the scope of work for pipe insulation removal, but only if the area will be unoccupied during all Phases of abatement. Several restrictions, which apply to the use of glove bags for asbestos removal purposes, may be found at OSHA Regulations 29 CFR 1926.1101.

2. Contractor shall set up a containment barrier around the immediate area of glove bag removal. This containment is to consist of two layers of six (6)-mil polyethylene sheeting walls and a two layer six-mil polyethylene sheeting floor forming a fully enclosed "cocoon"-like work area enclosure.

3. As an alternative to the "cocoon" enclosure described above, Contractor is permitted to erect a containment enclosure where all openings, windows, vents, and doors in the work area are sealed with two layers of six-mil polyethylene sheeting and duct tape. In addition, walls adjacent to the piping, floor surfaces below the piping, and any object in the work area shall be covered with two layers of six-mil polyethylene sheeting.

4. In either case, the containment area surrounding the glove bag area shall be under adequate negative pressure to achieve a minimum of four air changes per hour. Criteria for filtering and exhausting the work area shall be the same as in the total isolation method for removal.

5. Pipes and fittings where glove bags are to be used must be no warmer than 150°F, as the glove bag material may melt or stick to the pipes.

6. All workers must wear full protective suits and respirators during all Phases of glove bag work, including preparation, removal, clean up, and encapsulation.

7. Preparation of the area will include a minimum double-stage decontamination unit at the entrance to the contained area, equipped with a HEPA vacuum for personal decontamination, in accordance with OSHA 1926.1101, Appendix G. Glove bags will be placed on pipes or fittings and securely taped with tools enclosed. Bags will not have any holes, which might allow air to escape during removal. Bags will be checked with smoke tubes provided by Contractor. A HEPA vacuum will be inserted through the appropriate hole in the bag along with the nozzle for the water sprayer containing amended water. When such preparations are completed, approval of the Consultant will be obtained for each glove bag work area before removal begins.

8. It is recommended that removal be performed by two-person teams. One will support the vacuum and assist with wetting the material in the bag while the other does the actual cutting of the material. Once the material is removed and the pipes are clean and bare, the material in the bag will be thoroughly wetted down and forced to the bottom of the bag. All air in the bag will be vacuumed out, and the bottom portion of the bag where all the asbestos must be will be twisted around before separating the bag from the pipe. Bags will then be immediately placed in another labeled bag for disposal purposes. Glove bags are not permitted to be left in the work area for any length of time after the removal.

9. All surfaces in the glove bag area will then be wet-wiped and HEPA- vacuumed. Clean up shall include all loose and peeling paint and paint chips/debris from the glove bag work area. Polyethylene sheeting used to protect the immediate area will be discarded as asbestos waste.

Enclosure barriers will be left up until results of clearance air samples (if taken) are acceptable. Contractor will encapsulate the pipes and fittings for Consultant inspection.

10. Lock-down must be done with a pre-approved encapsulant, after the pipe is essentially dry. Workers performing lock-down must wear disposable protective clothing and suitable respirators. The lock-down material shall be applied with a low pressure (less than 500 psi), airless, spray-type mechanism or be hand-applied. A minimum of one coat of lock-down encapsulant will be applied. The lock-down encapsulant will be applied to both the substrate and the polyethylene sheeting, if in place. If the lock-down material is being applied to irregular, grooved, or corrugated surfaces, it should be administered from the opposing side, or at a right angle to the direction of the previous application.

11. Personal samples, containment area samples taken during glove bag operations, and/or final clearance air samples must not exceed 0.010 fibers/cc or above background levels. If this occurs, the area inside the containment must be thoroughly cleaned and encapsulated. Clearance air samples will then be taken with acceptance criteria of 0.010 f/cc required before the enclosure can be dismantled.

12. Glove bag work areas will be post-tested in the same manner and with the same acceptance criteria as specified for total isolation removal, i.e., 0.010 f/cc.

3.04 VAT/FLOOR COVERING AND ASSOCIATED MASTIC REMOVAL METHOD

A. Removal of vinyl asbestos floor tiles (VAT)/floor covering and associated asbestos-containing mastic, including removal of any asbestos-contaminated materials, including, but not limited to, additional layers of floor tiles and mastic, flooring paper, contaminated plywood sub-floor, leveling compound, and contaminated hardwood floors shall be in accordance with all applicable regulations including Part II, Department of Labor – Occupational Safety and Health Administration, 29 CFR Parts 1910, et. al., dated Wednesday, August 10, 1994. At a minimum, the following work practices shall apply:

1. Workers shall wear protective clothing and half-mask, dual-cartridge, HEPA-filtered respirator, at a minimum.

2. The work area shall be isolated as required by regulations and to the satisfaction of the Consultant. As a minimum, critical barriers, a negative pressure system, and a personal decontamination facility shall be erected in accordance with Section 3.02 of this Section. All areas were VAT/floor covering and mastic are to be removed shall be sealed off by the use of polyethylene sheeting on all openings and HEPA filtered negative pressure shall be established in each work area sufficient to achieve four air changes per hour.

3. VAT/floor covering and mastic shall be wet prior to removal and during removal.

4. Each tile shall be removed as a complete unit, with no breakage, wherever possible. Contractor shall remove any carpeting prior to removal of asbestos-containing flooring materials. It is the intention of the asbestos abatement scope of work to remove all layers of ACM flooring materials as well as any asbestos-contaminated materials down to the base substrate.

5. The exposed floor will be cleaned with a HEPA vacuum cleaner and wet-scraped. Repeat the process until the floor area is clean and smooth.

6. Grinding of mastic is not permitted unless work is being performed under the 'Total Isolation Method'.

7. Any chemicals to be used for removal of the mastic must be approved by the Consultant, Owner and General Contractor prior to being used.

8. Dispose of VAT/floor covering/mastic in a DEP-approved landfill, that legally accepts this type of waste.

3.05 DECONTAMINATION/WORK PROCEDURES

A. In order to avoid possible exposure to dangerous levels of asbestos, and to prevent possible contamination of areas outside the demarcated work zone, work shall follow the guidelines listed below.

1. At no time shall a worker entering the containment area go further than the Clean Room of the Decontamination Unit without a respirator and protective clothing.

2. Before leaving the work area, the worker shall remove all gross contamination and debris from the coveralls. In practice this is carried out by one worker assisting another.

3. All equipment used by the workers inside the demarcated work zone shall be either left in the Dirty Room of the Decontamination Unit or thoroughly decontaminated before being removed from the area. Extra work clothing (that in addition to the disposable garments supplied by the Contractor) shall be left in the Dirty Room of the Decontamination Unit until the completion of work in that area.

4. All persons leaving the removal area must shower before leaving the containment.

5. Under no circumstance shall workers or supervisory personnel be allowed to eat, drink, smoke, chew gum, or chew tobacco in the work area; to do so shall be grounds for the Consultant to stop all removal operations. Only in the case of life threatening emergency shall workers or supervisory personnel be allowed to remove their protective respirators while in the work area. In this situation, respirators are to be removed for as short a duration as possible.

6. As with additional clothing, all footwear shall be left inside the work area until the completion of the job, then cleaned or discarded.

3.06 DISPOSAL OF ASBESTOS WASTE

A. Waste removal procedure shall be done in accordance with all regulations as set forth by the agencies having authority to regulate.

B. The Contractor shall provide proof that disposal sites for the waste materials have current and valid permits to dump asbestos waste at the time of the pre-construction meeting.

C. Receipts shall be obtained by the Contractor from the dumping site(s), and submitted to the Owner upon request for final payment.

D. Warning labels having permanent, waterproof print and adhesive shall be affixed to all bags, trucks, drums (lids and sides), and other containers used to store and/or transport asbestos-containing material. Labels must be conspicuous and legible and contain the following warning:

CONTAINS ASBESTOS FIBERS

AVOID CREATING DUST

CANCER AND LUNG DISEASE HAZARD

E. The Contractor shall be responsible for all necessary precautions to prevent pollution by spilling during the performance of services and shall assume full responsibility for all Contractor-caused spills, which shall be cleaned up at the Contractor's expense.

F. Temporary storage of asbestos waste on-site must be approved by the Owner.

3.07 HOUSEKEEPING

A. Throughout the work period, the Contractor shall maintain the building and site in a standard of cleanliness as specified throughout these Sections.

1. Contaminated disposable clothing, respirator filters, and other debris shall be bagged and sealed at the end of each work day.

2. All asbestos generated by either removal or repair, shall be bagged immediately and not allowed to be left exposed at the end of each work day.

3. Respirators shall be thoroughly cleaned at the end of each work day and stored for the next days use.

4. The Contractor shall retain all stored items in an orderly arrangement allowing maximum access, not impeding traffic, and providing the required protection materials.

5. The Contractor shall not allow the accumulation of scrap, debris, waste material, and other items not required for completion of the work.

6. The Contractor shall provide adequate storage for all items awaiting removal from the job site, observing all requirements for fire protection and protection of the ecology.

7. Daily, and more often if necessary, the Contractor shall inspect the work areas and adjoining spaces, and pick up all scrap, debris, and waste material. Remove all such items to the place designated for their storage.

8. The Contractor shall maintain the site in a neat and orderly condition at all times.

3.08 AIR MONITORING

A. Background (pre-testing) air and appropriate dust samples may be taken to represent conditions before the Contractor starts masking and sealing operations.

B. During removal, area samples will be collected by the Consultant (Owner's Representative) outside major openings in the containment: in the clean room, at other critical points outside the work areas, just

outside the clean room, inside the contained work sites, and at HEPA exhaust locations. Contractor shall be responsible for all OSHA personal sampling.

C. Final clearance air samples will be collected inside the contained removal work area after all visual inspection criteria is met and the area is free and clear of any suspect material and debris. The insulation substrate, if any, must be clean and bare. The work area should be clear of any debris including loose and peeling paint from various surfaces and paint chips/debris from inside the work area.

1. Air will be agitated by means of a small leaf blower prior to the test, and kept agitated by means of a small electric fan. The results of all samples must be less than 0.010 fibers per cubic centimeter (f/cc) for PCM analysis or less than an average of 70 structures per square millimeter for TEM analysis to be in compliance with clearance criteria as described in this Section, Massachusetts Division of Occupational Safety regulations. The first set of final clearance air tests for each removal area will be paid by the Owner. In the event that these air tests do not pass the clearance criteria, any subsequent air tests that need to be performed shall be paid for by the Contractor. If the Contractor fails to meet the criterion, the Contractor will be required to re-clean the designated work site and then the Consultant (Owner's Representative) to repeat the final air clearance testing. Cleaning and testing will be repeated until the specified criterion is met.

3.09 WORK REVIEW

A. Consultant will review Contractor's work practices prior to the start of and during all asbestos related work and will report any Section violations to the Contractor. If the Contractor fails to correct deficiencies in a timely manner, the Owner will be notified in writing, and work may be stopped. The Consultant will review the containment structure and negative air conditions before work begins and after the Contractor Site Supervisor has given approval. Outside containment airborne fiber concentrations must not exceed 0.010 fibers/cc or pre-abatement levels, whichever is greater. If concentrations exceed this level, then work must be stopped, conditions reviewed as to the probable cause, and then corrected. A description of procedures regarding fiber concentrations greater than 0.010 fibers/cc outside the containment can be found above**.**

B. Consultant will keep a daily log of Contractor's work practices and will make these daily logs a part of the final project documents.

C. In addition to various daily inspections of containment and work practices, Consultant will make three (3) mandatory inspections throughout the removal work. These inspections include: a pre-abatement visual inspection, a post-abatement visual inspection, and a post-teardown visual inspection.

D. Each inspection must be requested by the Contractor and performed by Consultant, to the satisfaction of the Consultant, and be signed off by the Consultant, before work is to continue on to the next task in the phase. Failure on the part of the Contractor to obtain sign-off before proceeding is regarded as a serious violation of the contract and unacceptable.

END OF SECTION

PRICE SHEET

My Company offers the total, all inclusive, price of $_____

Company: _____

Authorized Signature: _____

Print Name: _____

Date: _____

Compliance

(Required Documents.)

Compliance

The compliance documents in this section must be completed, signed and returned **with your bid package**.

Purchasing Department

City of Waltham
610 Main Street
Waltham, MA 02452

Failure to submit the completed documents will cause the disqualification of the proposal.

Section Index

Check when Complete

- Non-collusion form and Tax Compliance form…… _____
- Corporation Identification Form…….. _____
- Certificate of Vote Authorization…….. _____
- Certificate of Insurance (showing all limits of WC &GL)..... _____
- Three (3) References…… _____
- 5% Bid Bond or Certified Check..…… _____
- Debarment Certificate …….. _____
- Prevailing Wage Certificate……. _____
- Right-to-know Law…… _____
- OSHA 10 Certificate for all Assigned Employees (MGL ch30, §39M and Ch 149) _____

Before the commencement of the Job, the contractor must provide to the above office:

- Performance Bond for 100% of the contract value and naming the City of Waltham ***(letter must be included with your response***)

Your Company's Name: _____

Service or Product Bid_____

NOTE: Failure to submit any of the required documents, in this or in other sections, with your bid response package may cause the disqualification of your proposal.

NON-COLLUSION FORM AND TAX COMPLIANCE FORM

CERTIFICATE OF NON-COLLUSION

The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity or group of individuals. The undersigned certifies that no representations made by any City officials, employees, entity, or group of individuals other than the Purchasing Agent of the City of Waltham was relied upon in the making of this bid

_____, _____
(Signature of person signing bid or proposal) Date

_____
(Name of business)

TAX COMPLIANCE CERTIFICATION

Pursuant to M.G.L. c. 62C, & 49A,I certify under the penalties of perjury that, to the best of my knowledge and belief, I am in compliance with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

_____, _____
Signature of person submitting bid or proposal Date

_____
Name of business

NOTE

Failure to submit any of the required documents, in this or in other sections, with your bid response package may cause the disqualification of your proposal.

CERTIFICATE OF VOTE OF AUTHORIZATION

Date:

I _____, Clerk of_____hereby certify that at a meeting of the Board of Directors of said Corporation duly held on the_____day of_____at which time a quorum was present and voting throughout, the following vote was duly passed and is now in full force and effect:

VOTED: That _____(*name*) is hereby authorized, directed and empowered for the name and on behalf of this Corporation to sign, seal with the corporate seat, execute, acknowledge and deliver all contracts and other obligations of this Corporation; the execution of any such contract to be valid and binding upon this Corporation for all purposes, and that this vote shall remain in full force and effect unless and until the same has been altered, amended or revoked by a subsequent vote of such directors and a certificate of such later vote attested by the Clerk of this Corporation.

I further certify that_____ is duly elected/appointed_____ _____of said corporation

SIGNED:

(Corporate Seal)

_____

Clerk of the Corporation:

Print Name: _____

COMMONWEALTH OF MASSACHUSETTS

County of_____ **Date:**

Then personally appeared the above named and acknowledged the foregoing instrument to be their free act and deed before me,_____

Notary Public;

My Commission expires: _____

CORPORATION IDENTIFICATION

The bidder for the information of the Awarding Authority furnishes the following information.

If a Corporation:

Incorporated in what state _____

President _____

Treasurer _____

Secretary _____

Federal ID Number_____

If a foreign (out of State) Corporation – Are you registered to do business in Massachusetts?

Yes _____, No _____

If you are selected for this work you are required under M.G.L.ch. 30S, 39L to obtain from the Secretary of State, Foreign Corp. Section, State House, Boston, a certificate stating that you Corporation is registered, and furnish said certificate to the Awarding Authority prior to the award.

If a Partnership: (Name all partners)
Name of partner _____
Residence _____
Name of partner _____
Residence _____

If an Individual:
Name _____
Residence _____

If an Individual doing business under a firm's name:
Name of Firm _____
Name of Individual _____
Business Address _____
Residence _____
Date _____

Name of Bidder _____
By _____
Signature

_____
Title

_____
Business Address (POST OFFICE BOX NUMBER NOT ACCEPTABLE)

_____
City State Telephone Number Today's Date

PROVIDE THREE (3) SERVICE APPROPRIATE REFERENCES

1. Company Name:
   Address:
   Contact Name:
   Phone #
   Type of service/product provided to this Company:

   Dollar value of service provided to this Company:

2. Company Name:
   Address:
   Contact Name:
   Phone #
   Type of service/product provided to this Company:

   Dollar value of service provided to this Company:

3. Company Name:
   Address:
   Contact Name:
   Phone #
   Type of service/product provided to this Company:

   Dollar value of service provided to this Company:

NOTE

Failure to submit any of the required documents, in this or in other sections, with your bid response package will be cause for the disqualification of your company.

WEEKLY PAYROLL RECORDS REPORT & STATEMENT OF COMPLIANCE

In accordance with Massachusetts General Law c. 149, §27B, a true and accurate record must be kept of all persons employed on the public works project for which the enclosed rates have been provided, A Payroll Form has been printed on the reverse of this page and includes all the information required to be kept by law. Every contractor or subcontractor is required to keep these records and preserve them for a period of three years from the date of completion of the contract.

In addition, every contractor and subcontractor is required to submit, on a weekly basis, a copy of his or her weekly payroll records to the awarding authority. For every week in which an apprentice is employed, a photocopy of the apprentice's identification card must be attached to the payroll report. Once collected, the awarding authority is also required to preserve those reports for three years.

In addition, each such contractor, subcontractor, or public body shall furnish to the awarding authority directly, within fifteen days after completion of its portion of the work, a statement, executed by the contractor, subcontractor or public body who supervises the payment of wages, in the following form:

STATEMENT OF COMPLIANCE

_____, 200____

I_____, _____
(Name of signatory party) (Title)

I do hereby state that I pay or supervise the payment of the persons employed by

_____ on the_____
(Contractor, subcontractor or public body) (Building or project)

and that all mechanics and apprentices, teamsters, chauffeurs and laborers employed on said project have been paid in accordance with wages determined under the provisions of sections twenty-six and twenty-seven of chapter one hundred and forty nine of the General Laws.

Signature_____, Title _____

Print_____

WEEKLY PAYROLL REPORT FORM

Company Name: _____

Project Name: _____

Awarding Auth.: _____

Work Week Ending: _____

☐ Final Report

☐ Prime Contractor

☐ Subcontractor
List Prime Contractor: _____

Employer Signature: _____

Print Name & Title: _____

Employee Name & Address	Work Classification	Hours Worked							(A) Tot. Hrs.	(B) Hourly Base Wage	Employer Contributions			(F) [B+C+D+E] Hourly Total Wage (prev. wage)	(G) [A*F] Weekly Total Amount
		S	M	T	W	T	F	S			(C) Health & Welfare	(D) Pension	(E) Supp. Unemp.		

NOTE: Every contractor and subcontractor is required to submit a copy of their weekly payroll records to the awarding authority.

RIGHT TO KNOW LAW

Any vendor who receives an order or orders resulting from this invitation agrees to submit a Material Safety Data Sheet (MSDS) for each toxic or hazardous substance or mixture containing such substance, pursuant to M.G.L. c. 111F, §§8,9 and 10 and the regulations contained in 441 CMR 21.06 when deliveries are made. The vendor agrees to deliver all containers properly labeled pursuant to M.G.L. c. 111F §7 and regulations contained in 441 CMR 21.05. Failure to furnish MSDS and/or labels on each container may result in civil or criminal penalties, including bid debarment and action to prevent the vendor from selling said substances, or mixtures containing said substances within the Commonwealth. All vendors furnishing substances or mixtures subject to Chapter 111F or M.G.L. are cautioned to obtain and read the laws, rules and regulations referenced above. Copies may be obtained from the State House Bookstore, Secretary of State, State House, Room 117, Boston, MA (617) 727-2834.

Authorized Signature Indicating Compliance with the Right-to-know laws:

Signature **Date**

Print Name

NOTE

Failure to submit any of the required documents, in this or in other sections, with your bid response package may cause the disqualification of your proposal.

DEBARMENT CERTIFICATION

In connection with this bid and all procurement transactions, by signature thereon, the respondent certifies that neither the company nor its principals are suspended, debarred, proposed for debarment, declared ineligible, or voluntarily excluded from the award of contracts, procurement or non procurement programs from the Commonwealth of Massachusetts, the US Federal Government and /or the City of Waltham. "Principals" means officers, directors, owners, partners and persons having primary interest, management or supervisory responsibilities with the business entity. Vendors shall provide immediate written notification to the Purchasing Agent of the City of Waltham at any time during the period of the contract of prior to the contract award if the vendor learns of any changed condition with regards to the debarment of the company or its officers. This certification is a material representation of fact upon which reliance will be placed when making the business award. If at any time it is determined that the vendor knowingly misrepresented this certification, in addition to other legal remedies available to the city of Waltham, the contract will be cancelled and the award revoked.

Company Name _____

Address _____

City _____, State_____, Zip Code _____

Phone Number (____) _____

E-Mail Address _____

Signed by Authorized Company Representative:

_____

Print name _____,

Date _____

10 HOURS OSHA TRAINING CONFIRMATION

Chapter 306 of the Acts of 2004

CONSTRUCTION PROJECTS

AN ACT RELATIVE TO THE HEALTH AND SAFETY ON PUBLIC

The undersigned hereby certifies that all employees to be employed at a worksite for construction, reconstruction, alteration, remodeling, repair, installation, demolition, maintenance or repair of any public work or any public building estimated to cost more than $10,000.00 have successfully completed a course in construction safety and health approved by the **United States Occupational Safety and Health Administration** that is at least **10 hours** in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first payroll report for each employee and will comply with all laws and regulations applicable to awards of subcontracts subject to section 44F.

Company Name: _____

Address: _____

Signature: _____

Title: _____

Print Name _____

_____

Date

See Chapter 306 of the Acts of 2004

NOTE

Failure to submit any of the required documents, in this or in other sections, with your bid response package will be cause for the disqualification of your company.

Price Sheet, Asbestos Abatement, Former Banks School Phase 2 and 3 Renovation

		"a"	"b"
Location	**Asbestos-Containing Material**	**Estimated Quantity**	**Add/Deduct Unit Price**
First Floor	Pipe Insulation	1,795 LF	$_____per LF
	Pipe fitting insulation on fiberglass line	44 each	$_____per each
	9”x 9” green floor tile	900 sq ft	$_____per SF
Second Floor	Pipe fitting insulation on fiberglass line	4 each	$_____per each
	Pipe Insulation (assumed concealed inside walls)	100 sq ft	$_____per SF
	Total for Base Bid	**$_____**	

Please note that the price sheet above consists of two sections: the first is the base bid in column **"a"**, the second is the unit pricing **"b"** which will be used as add/deduct in the event the estimated quantities are not accurate or additional work is needed.

COMPANY'S NAME _____

AUTHORIZED SIGNATURE: _____

PRINT NAME: _____

DATE: _____