



**WORK SPECIFICATIONS FOR
ASBESTOS ABATEMENT AT
TATES CREEK HIGH SCHOOL**

OCTOBER 21, 2021

Prepared By:

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A handwritten signature in black ink that reads "Michael B. McGonigle".

Michael B. McGonigle
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ASTI Project # MB533

Table of Contents

1.1 RELATED DOCUMENTS:..... 1

1.2 SUMMARY OF WORK:..... 1

1.3 GENERAL: 2

1.4 RELATED WORK SPECIFIED ELSEWHERE: 2

1.5 SUBMITTALS:..... 3

1.6 DISPOSAL: 4

2.1 WETTING MATERIALS:..... 6

2.2 OTHER MATERIALS..... 6

3.1 ASBESTOS REMOVAL METHODS..... 7

3.2 WORKER PROTECTION:..... 12

3.3 ADDITIONAL OSHA REQUIREMENTS 12

3.4 AIRBORNE FIBER COUNTS: 12

3.5 WORK AREA CLEARANCE..... 13

SITE PLAN / WORK LOCATIONSAPPENDIX A

FORM OF PROPOSALAPPENDIX B

SECTION 02 08 01
REMOVAL OF ASBESTOS-CONTAINING MATERIALS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. Drawings and Form of Proposal apply to work of this section.

1.2 SUMMARY OF WORK:

A. The following building materials must be removed prior to demolition activities:

1. Asbestos-containing building materials in the specified areas.
 - i. Approximately 75 asbestos-containing pipe joints in the old boiler room. Includes small white water line joints at entrance door, upper and lower hard-mud joints, end caps, pipe hangers and pipe joints in floor pit.
 - ii. Five (5) asbestos-containing large gate valves with end face compound (about 2 feet long, 8" diameter) in the old boiler room.
 - iii. Approximately 20 asbestos-containing pipe joints in the air handling room adjacent to the cafeteria.
 - iv. Four (4) asbestos-containing large gate valves with end face compound (about 18" long, 8" diameter) in the air handling room adjacent to the cafeteria.
 - v. Approximately 7,880 square feet of asbestos-containing 9" floor tile and mastic in the cafeteria.
 - vi. Asbestos-containing transite panels, 30 units, approximately 4 feet by 6 feet each in the gym. The spaces, once opened, must be covered with plywood to temporarily close the resulting opening and must be weather-tight.
 - vii. Six window units with asbestos window glazing (each is about 4 feet by 6 feet, located about 20 feet off grade) at the rear of Heating Plant. The spaces, once opened, must be covered with plywood to temporarily close the resulting opening and must be weather-tight.

Special Notes: Work is to be completed at winter break and spring break. Floor tile removal must be completed during winter break. Floor tile removal must be completed to a condition (not sticky or tacky) that will allow use of the floor. Pipe

insulation can be removed at winter break, partially, or completely. If windows or transite panels are addressed at winter break, all of that work must be completed, including filling the openings.

Asbestos-containing building material quantities are estimates that have been provided for assistance in bidding. Interested Contractors are to field verify all quantities, conditions, dimensions, etc. related to this project prior to bidding. Any failure by the Contractor to acquaint himself with all the available information concerning these conditions will not relieve him from responsibility for estimating properly the difficulty or cost of successfully performing the Work.

1.3 GENERAL:

Asbestos Containing Materials

Work Area: Is the location where asbestos-abatement or hazardous material removal work occurs. It is a variable of the extent of work of the contract. It will be the area of building where asbestos containing materials are located. A "work area" is considered contaminated during the work, and must be isolated from the balance of the building, and decontaminated at the completion of the asbestos removal work.

CONTROL ACCESS:

Provide warning signs at all visual and/or physical barriers reading as follows:

Legend	Notation
KEEP OUT	3" Sans Serif Gothic or Block
BEYOND THIS POINT	1" Sans Serif Gothic or Block
ASBESTOS ABATEMENT WORK	1" Sans Serif Gothic or Block
IN PROGRESS	1" Sans Serif Gothic or Block
BREATHING ASBESTOS DUST MAY BE HAZARDOUS TO YOUR HEALTH	14 Point Gothic

1.4 RELATED WORK SPECIFIED ELSEWHERE:

N/A

1.5 SUBMITTALS:

Before Start of Work: Submit the following to the Designer for review. Do not start work until these submittals are returned with Designer's approval.

- Contingency Plans for emergency actions.
- Telephone Numbers and location of emergency services.
- Notifications sent to other entities at the work site.
- Ten Day Notification: Submit a copy of the Kentucky "Ten Day Report Form for Prior Notification of Asbestos Abatement Activities." Any requests for variance to Kentucky Division of Waste Management or Division for Air Quality Regulations not included on the "Alternative Procedures Request Form" should be included with this submission.
- Alternative Procedures Request Form: Submit a copy of the "Alternative Procedures Request Form" submitted to Kentucky Division for Air Quality relating any alternative work procedures planned (i.e., non-friable removal procedures).
- Asbestos abatement contractor license and worker certificates

During the Work: The following submittals may be requested:

- Surfactant: Submit product data, use instructions, and recommendations from manufacturer of removal encapsulant intended for use. Include data substantiating that material complies with requirements.
- NESHAPS Certification: Submit certification from manufacturer of surfactant or removal encapsulant that, to the extent required by this specification, the material, if used in accordance with manufacturer's instructions, will wet hazardous materials to which it is applied as required by the National Emission Standard for Hazardous Air Pollutants (NESHAPS) Asbestos Regulations (40 CFR 61, Subpart M).
- Material Safety Data Sheet: Submit the Material Safety Data Sheet, or equivalent, in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) for each surfactant and encapsulating material proposed for use on the work. Include a separate attachment for each sheet indicating the specific worker protective equipment proposed for use with the material indicated.

At the completion of Work:

- Waste: Submit copies of all manifests and landfill receipts to Owner's Representative. Submit evidence of yearly KY DOT permit from waste hauler.

1.6 DISPOSAL:

ASBESTOS:

Asbestos-containing waste material and debris which is packaged in accordance with the provision of this Specification may be disposed of at approved designated sanitary landfills when certain precautions are taken.

Notice and Permit from Appropriate State and/or Local Agencies

Carefully load containerized waste on enclosed trucks for transport. Exercise care before and during transport, to insure that no unauthorized persons have access to the material. The container used to store and/or transport asbestos-containing waste materials, shall meet the following requirements. It shall be of rigid construction, completely enclosed and lockable. The container shall be sealed inside with 6-mil poly. All transport containers must be covered at all times when not in use. NESHAP & DOT signs must be on storage/transport containers during loading, transport and unloading.

Do not transport waste materials on an open truck. If 55 gallon drums are used, label drums with same warning labels as bags. Drums may be reused after decontamination if bags did not break. Treat drums that have been contaminated as asbestos-containing waste and dispose of in accordance with this Specification.

Advise the sanitary landfill operator, at least twenty-four hours in advance of transport, of the quantity of material to be delivered. At the burial site, sealed drums shall be carefully loaded off of the truck. All debris will then be treated as contaminated waste and disposed as set forth in this section. Bags, boxes, barrels, or packages of ACM waste must be individually removed from transport container. Do not dump truck boxes or dumpsters.

Retain receipts from landfill for materials disposed of and provide copies to Owner's Representative routinely throughout project.

Contractor shall ensure that the Waste Disposal Site returns a copy of the Waste Shipment Record to the Owner as required by 40 CFR Part 61 (Amended), November 20, 1990.

All water from contaminated areas shall be filtered to 5 microns or less.

PART 2 - PRODUCTS:

- 2.1 WETTING MATERIALS: For wetting prior to disturbance of asbestos-containing materials use either amended water or a removal encapsulant:

Amended Water: Provide water to which a surfactant has been added. Use a mixture of surfactant and water which results in retardation of fiber release during disturbance of the material equal to or greater than that provided by the use of 50% polyoxyethylene ester and 50% polyoxyethylene ether mixed with five gallons of water.

- 2.2 OTHER MATERIALS

Polyethylene Sheet: Provide flame resistant polyethylene film that conforms to requirements set forth by the National Fire Protection Association Standard 701, Small Scale Fire Test for Flame-resistant Textiles and Films. Provide largest size possible to minimize seams, 6.0 or 10.0 mils thick as indicated, frosted or black as indicated.

Duct Tape: Provide duct tape in 2" or 3" widths as indicated, with an adhesive which is formulated to aggressively stick to sheet polyethylene.

Spray Cement: Provide spray adhesive in aerosol cans which is specifically formulated to stick tenaciously to sheet polyethylene.

Disposal Bags: If used, provide 6 mil thick leak-tight polyethylene bags labeled with three labels with text as follows:

First Label:

CAUTION
Contains Asbestos Fibers
Avoid Opening or Breaking Container
Breathing Asbestos is Hazardous to Your Health

Second Label: Provide in accordance with 29 CFR 1910.1200(f) of OSHA's Hazard Communication standard:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD
BREATHING AIRBORNE ASBESTOS, TREMOLITE, ANTHOPHYLLITE, OR
ACTINOLITE FIBERS IS HAZARDOUS TO YOUR HEALTH

Third Label: Provide in accordance with 40 CFR 61.150 (November 20, 1990 Revision): Name of generator and location at which waste was generated.

Fourth Label: Provide in accordance with 49 CFR 173: current Department of Transportation (DOT) labeling requirements for storing and shipping asbestos.

Glove bags: If used, provide 6 mil glove bags that comply with OSHA 29 CFR 1926.1101(g)(5)(ii) or (iii).

PART 3 - EXECUTION

3.1 ASBESTOS REMOVAL METHODS

NON-FRIABLE REMOVAL

FLOOR TILE

Follow the procedures in the "Recommended Work Practices("RWPs") for the Removal of Resilient Floor Coverings" as published by the Resilient Floor

Covering Institute (“RFCI”). OSHA has issued a revised standard on 8/10/94 regarding removal of resilient floor covering and has determined that “intact” resilient floor covering can be removed pursuant to a “negative exposure assessment” in compliance with the revised standards by appropriately trained flooring personnel using RWPs. These procedures can be used without the need to use asbestos abatement measures (i.e., respirators, negative pressure enclosures, etc.). Written notification on the EPA Ten Day Report Form is required and should clearly indicate under the “Abatement Techniques “ section on the first page that Contractor is using the “Recommended Work Practices”. The Contractor should describe the flooring as nonfriable, describe the specific removal method, and indicate that the flooring material will be kept nonfriable through the use of the Recommended Work Practices.

- HEPA vacuums equipped with metal floor tool (no brush) shall be used to clean floors.
- Remove floor tile mastic with citrus based solvents (no oil-based solvents).
- All scraping of residual adhesive shall be performed using wet methods or heat. All associated floor tile mastic shall be completely removed by the Contractor and removal completion verified by the Project Designer.
- Dry sweeping is prohibited.
- Floor coverings shall be removed intact or removal shall be performed under negative pressure enclosure using friable asbestos abatement techniques and accredited personnel.

WINDOW UNITS

The Contractor shall ensure that the following work practices are followed:

Prior to removal place a poly drop cloth on the surfaces inside and outside the base of each window to be removed. The dimensions of each drop cloth shall be large enough to catch any pieces of glazing compound that may fall or be dislodged from the window during removal and handling.

Much of the glazing compound is friable and may be delaminating. Any loose pieces of glazing compound shall be removed via wet methods and/or HEPA vacuuming. It is permissible to remove the entire window assembly with intact glazing compound left in place so long as:

- the window assemblies are handled carefully,
- all glazing compound is adequately wetted with amended water,

- the contractor employs effective and compliant control methods to prevent further breakage and releases of glazing compound during removal of the window assemblies.

Any loose pieces of asbestos glazing compound that are disturbed during window removal and fall to the drop cloths, floors, sills, other building surfaces, or the ground shall be wetted and placed in sealed containers as ACM waste or removed by HEPA vacuuming.

Once a window assembly is removed, it shall be wrapped tightly/sealed with at least two layers of 6-mil poly sheeting held in place with duct tape. Each wrapped window assembly shall be labeled appropriately as asbestos-containing waste and placed in a poly-lined dumpster, roll-off box, or other suitable container for transport to the approved landfill for disposal.

Install 5/8" plywood in openings where windows are removed. If needed for support or attachment of plywood, install 2" x 4" stud framing. Seal the perimeter of plywood with caulking to ensure the opening is weather-tight.

TRANSITE PANELS

The Contractor shall ensure that the following work practices are followed:

- Prior to removal place a poly drop cloth under all panels to be removed.
- Unscrew fasteners holding transite panels in place. If nailed, nails shall be cut with flat, sharp instruments.
- Cutting, abrading or breaking of transite panels is prohibited.
- Each panel or door shall be sprayed with amended water prior to removal.
- Transite panels shall be removed by hand and carefully passed to the ground and placed on the drop cloth.
- Each panel shall be immediately placed in an impervious waste bag or wrapped in plastic sheeting.
- Install 5/8" plywood in openings where transite panels are removed from the gymnasium. If needed for support or attachment of plywood, install 2" x 4" stud framing. Seal the perimeter of plywood with caulking to ensure the opening is weather-tight.

PIPE INSULATION GLOVE BAG

Removal of pipe insulation may be removed by glove bag technique. If the glovebag technique is performed, the following procedures will be used:

- Critical barriers shall be placed over all openings to the regulated area.
- HVAC systems shall be isolated in the regulated area by sealing with a double layer of 6 mil plastic.
- Impermeable dropcloths shall be placed on surfaces beneath all removal activity.
- All objects within the regulated area shall be covered with impermeable dropcloths.
- Glove bags shall be made of 6 mil thick plastic and shall be seamless at the bottom.
- Each glove bag shall be installed so that it completely covers the circumference of pipe or other structure where the work is to be done.
- Glovebags shall be smoke tested for leaks and any leaks sealed prior to use.
- Glovebags shall not be used on surfaces whose temperature exceeds 150°F.
- Prior to disposal, glove bags shall be collapsed by removing air within them using a HEPA vacuum.
- Before beginning the operation, loose and friable material adjacent to the glove bag operation shall be wrapped and sealed in two layers of 6 mil poly or otherwise rendered intact.
- At least two persons shall perform Class I glove bag removals.
- Negative pressure glove bags may be used for the removal of all pipe fittings.
 - Attach HEPA vacuum system or other device to bag to prevent collapse during removal.
 - The HEPA vacuum cleaner or other device used to prevent collapse of bag during removal shall run continually during the operation.
- Where a separate waste bag is used along with a collection bag and discarded after one use, the collection bag may be reused if rinsed clean with amended water before reuse.

- The accumulation of debris and water in the glovebag should not exceed the ability of the workers to safely manipulate the bag as needed.
- Remove contaminated tools in an inverted glove for transfer to the next glovebag.

ASBESTOS FRIABLE/GROSS REMOVAL:

If gross removal procedures are used for ACM, perform abatement in accordance with 401 KAR 58:040. Thoroughly wet to satisfaction of Owner's Representative asbestos-containing materials to be removed prior to removal to reduce fiber dispersal into the air. Accomplish wetting by a fine spray (mist) of amended water or removal encapsulant. Saturate material sufficiently to wet to the substrate without causing excess dripping. Allow time for water or removal encapsulant to penetrate material thoroughly. If amended water is used, spray material repeatedly during the work process to maintain a continuously wet condition. If a removal encapsulant is used, apply in strict accordance with manufacturer's written instructions. Perforate outer covering of any installation which has been painted and/or jacketed in order to allow penetration of amended water or removal encapsulant, or where necessary, carefully strip away while simultaneously spraying amended water or removal encapsulant on the installation to minimize dispersal of asbestos fibers into the air.

Mist (Fog) work area continuously with amended water whenever necessary to reduce airborne fiber levels.

Gently remove saturated asbestos-containing material and place it directly into disposal bags. Do not allow material to dry out. Once a disposal bag is full, twist neck of bags, bend over and seal with minimum three wraps of duct tape. Clean outside of bag and move bag to washdown station adjacent to material decontamination unit.

Evacuate air from disposal bags with a HEPA filtered vacuum cleaner before sealing.

MINI-ENCLOSURES

Where practical and applicable, the use of mini-enclosures may be performed in accordance with OSHA Standard 1926.1101 (i.e., large gate valve insulation). The Contractor shall use an isolation method which prevents the migration of airborne asbestos from the regulated area, as verified by perimeter area surveillance during each work shift showing no visible asbestos dust and monitoring showing that clearance levels contained in 40 CFR Part 763, Subpt. E, of the EPA Asbestos in Schools Rule are met.

3.2 WORKER PROTECTION:

OSHA regulation 29 CFR Part 1926.1101 is the Asbestos Standard for the Construction Industry. OSHA regulation 29 CFR Part 1926.62 is the Lead Standard for the Construction Industry. Ensure that all training, medical surveillance, exposure assessment, worker protection, and work practices comply with these standards as applicable. Before beginning work with any material for which a Material Safety Data Sheet has been submitted, provide workers with the required protective equipment as needed. Require that appropriate protective equipment be used at all times.

3.3 ADDITIONAL OSHA REQUIREMENTS

Employers are also responsible for the general health and safety of their employees on any job site. As an employer you must: (1) meet your responsibility to provide a workplace free from recognized hazards; (2) be familiar with mandatory OSHA standards (i.e., hazard communication requirements); (3) examine workplace conditions to make sure they can conform to applicable OSHA standards; (4) minimize hazards; and (5) make sure employees have and use safe tools and equipment.

3.4 AIRBORNE FIBER COUNTS:

General: Use work procedures that result in an 8 hour Time Weighted Average (TWA) airborne fiber count less than that indicated in the section of these specifications on "Air Monitoring - Test Laboratory Services." If airborne fiber counts exceed this level, immediately mist the area with amended water to lower fiber counts and revise work procedures to maintain airborne fiber levels within the required limit.

3.5 WORK AREA CLEARANCE

CONTRACTOR RELEASE CRITERIA:

The Work is complete when the work area is visually clean and clearance air monitoring confirms the airborne fiber levels have been reduced to the level specified below.

AIR MONITORING:

To determine if the elevated airborne fiber counts encountered during abatement operations have been reduced to the specified level, the Owner may secure samples and analyze them according to the following procedures.

PHASE CONTRAST MICROSCOPY:

Analysis: Fibers on each filter will be measured using the NIOSH 7400 procedures, A rules.

Release Criteria: Phase I decontamination of the work site is complete when every work area sample is below the Detection Limit 0.01 f/cc.

TRANSMISSION ELECTRON MICROSCOPY:

Analysis: Where the quantity of friable asbestos material in a given work area exceeds 160 square feet or 260 linear feet, fibers on each filter will be measured in accordance with AHERA 40 CFR Part 763.

Release Criteria: If TEM analysis is required, decontamination of the work site is complete when every work area sample is below the clearance criteria of 70 s/mm². If the average of the five samples is above the clearance criteria then the decontamination is incomplete and recleaning is required. Five air samples per enclosure area will be collected. The Contractor will be responsible for subsequent air monitoring costs if the first set of clearance samples fail.

LABORATORY TESTING:

PHASE CONTRAST MICROSCOPY AND TRANSMISSION ELECTRON
MICROSCOPY:

The services of a testing laboratory will be employed by the Owner to perform laboratory analysis of the air samples. A microscope and technician will be set up at the job site (for PCMs), or samples will be sent daily by overnight mail, so that verbal reports on air samples can be obtained within 48 hours (for TEM's). A complete record, certified by the testing laboratory, of all air monitoring tests and results will be furnished to the Designer, the Owner, and the Contractor.

CERTIFICATION OF VISUAL INSPECTION

In accordance with SubSection 3.5 "Work Area Clearance" the contractor hereby certifies that he has visually inspected the work area (all surfaces including pipes, counters, ledges, walls, ceiling, floor, behind critical barriers, sheet plastic, etc.) and has found no dust, debris or residue.

by: (Signature) (Date)

(Print Name)

(Print Title)

PROJECT DESIGNER CERTIFICATION

The Project Designer hereby certifies that he has accompanied the contractor on his visual inspection and verifies that this inspection has been thorough and to best of his belief, the contractor's certification above is a true and honest one.

by: (Signature) (Date)

(Print Name)

(Print Title)

WORK AREA

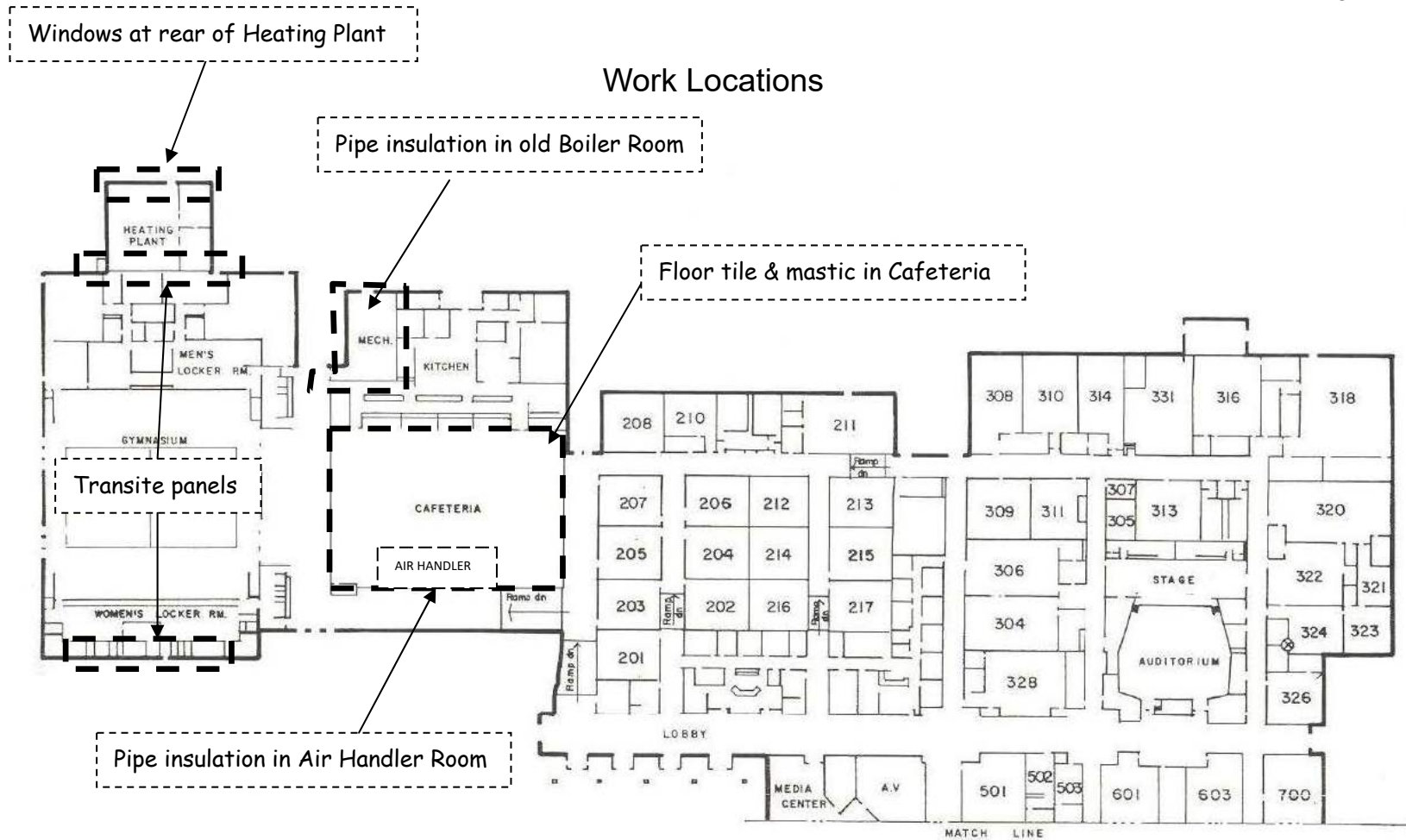
Location:

Room:

Activity Performed:

END OF SECTION

APPENDIX A
SITE PLAN / WORK LOCATIONS



TATES CREEK SENIOR HIGH

Drawing: TCHS - 1 (10/21/21)

APPENDIX B
FORM OF PROPOSAL

Date: _____ To: (Owner) FAYETTE COUNTY PUBLIC SCHOOLS

Project Name: PHASE 1 ASBESTOS ABATEMENT - TCHS Bid Package No. MB533-1

City, County: LEXINGTON, KY - FAYETTE COUNTY

Name of Contractor: _____

Mailing Address: _____

Business Address: _____ Telephone: _____

Having carefully examined Specifications and Drawings for the above referenced project, the undersigned bidder proposes to furnish all labor, materials, equipment, tools, supplies, and temporary devices required to complete the work in accordance with the contract documents and any addenda listed below for the price stated herein.

Addendum _____ (Insert the addendum numbers received or the word "none" if no addendum received.)

BASE BID: For the construction required to complete the work, in accordance with the contract documents, I/We submit the following lump sum price of:

Use Figures

_____ Dollars & _____ Cents

Use Words

Use Words

ALTERNATE BIDS: (If applicable and denoted in the Bidding Documents)

For omission from or addition to those items, services, or construction specified in Bidding Documents by alternate number, the following lump sum price will be added or deducted from the base bid.

Alternate Bid No.	Alternate Description	+ (Add to the Base Bid)	- (Deduct from the Base Bid)	No Cost Change from the Base Bid
Alt. Bid No. 1				<input type="checkbox"/>
Alt. Bid No. 2				<input type="checkbox"/>
Alt. Bid No. 3				<input type="checkbox"/>
Alt. Bid No. 4				<input type="checkbox"/>
Alt. Bid No. 5				<input type="checkbox"/>
Alt. Bid No. 6				<input type="checkbox"/>
Alt. Bid No. 7				<input type="checkbox"/>
Alt. Bid No. 8				<input type="checkbox"/>
Alt. Bid No. 9				<input type="checkbox"/>
Alt. Bid No. 10				<input type="checkbox"/>

A maximum of 10 Alternate Bids will be acceptable with each Base Bid. Do not add supplemental sheets for Alternate Bids to this document.

UNIT PRICES:

Indicate on the lines below those unit prices to determine any adjustment to the contract price due to changes in work or extra work performed under this contract. The unit prices shall include the furnishing of all labor and materials, cost of all items, and overhead and profit for the Contractor, as well as any subcontractor involved. These unit prices shall be listed in units of work.

	<u>WORK</u> (to be filled out by the Architect)	<u>PRICE / UNIT</u> (to be filled out by the Contractor)	<u>UNIT</u> (to be filled out by the Contractor)
1.	Mobilization		Trip
2.	Remove and dispose of floor tile & mastic		Square Foot
3.	Remove and dispose of pipe joints		Each
4.	Remove and dispose of transite panels		Square Foot
5.	Remove and dispose of window units		Square Foot
6.			
7.			
8.			
9.			
10.			

The bidder hereby agrees that failure to submit herein above all required information and/or prices can cause disqualification of this proposal.

Submitted by:

NAME OF CONTRACTOR / BIDDER: _____

AUTHORIZED REPRESENTATIVE'S NAME: _____
Signature

AUTHORIZED REPRESENTATIVE'S NAME (printed): _____

AUTHORIZED REPRESENTATIVE'S TITLE: _____

This form shall not be modified.