AHERA
ASBESTOS INSPECTION
&
MANAGEMENT PLAN

for

Grounds Building
3644 Lee Road
Shaker Heights, Ohio

March 2017

7118 Industrial Park Boulevard • Mentor, Ohio 44060-5314
440-951-3514 • 800-875-3514 • Fax: 440-951-3774 • www.eagroupohio.com

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Environmental Analysis and Management

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PART I

BUILDING INSPECTION/REINSPECTION REPORT

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AHERA
ASBESTOS HAZARD EMERGENCY RESPONSE ACT

Shaker Heights City School District
Grounds Building

SPECIAL PROVISIONS CERTIFICATION

REINSPECTION AND ASSESSMENT:

I hereby certify that the reinspection and asbestos assessments that I have reviewed as prepared by others, for this Local Educational Agency (LEA):

Grounds Building
3644 Lee Road
Shaker Heights, Ohio

was conducted according to the requirements of U.S. Environmental Protection Agency regulation 40 CFR Subpart E; to the best of my knowledge and belief

by _____ this 22nd day
SIGNATURE
of December, 2016

PRINT NAME: Michael Kovell

TITLE: Certified Asbestos Hazard Evaluation Specialist (CAHES) #34424

ACCREDITATION: Building Inspector / Management Planner

16 TSI 65596 ir/16 TSI 65626 mpr	OHIO
COURSE	STATE

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1.0 INTRODUCTION

Based Shaker Heights City School District contracted certified entities to perform the original inspection for asbestos-containing materials (ACMs) in the Grounds Building, consistent with the Asbestos Hazard Emergency Response Act (AHERA). The purpose of this inspection was to: **1)** identify those areas where ACMs are present per AHERA; **2)** to assess material condition and the potential for disturbance; **3)** to recommend appropriate strategies to control or eliminate potential problems; and, **4)** to develop a comprehensive Asbestos Management Plan. Original inspection documentation is kept on file for reference purposes, and is available upon request. The inspection report forms the basis for future management of ACM at the Grounds Building.

This Asbestos Inspection/Management Plan report is a two-part document that details the inspection and reinspection process (Part I) and the Management Plan objectives and responsibilities (Part II) for Grounds Building.

Section 2 of Part I describes the inspection and reinspection procedures, bulk sample collection and analytical techniques, and the material evaluation and assessment methods utilized during the inspection and reinspection process. This section also explains how estimates were derived for those areas found to be treated or covered with ACM.

Section 3 of Part I provides information and summary tables for Grounds Building. Table 3-1, the "Inventory of Asbestos-Containing Materials", identifies those building materials at Grounds Building that either tested positive for asbestos or were assumed to be asbestos-containing. These materials are inventoried by location, ACM type and material.

Appendix A contains the floor plan(s) for the school.
Appendix B contains results for suspect ACMs that have been sampled and analyzed.
Appendix C contains the AHERA Three-Year Reinspection Sheet forms.
Appendix D contains the AHERA Asbestos 6-Month Periodic Surveillance Data Sheet forms.
Appendix E contains the AHERA Annual Notification Letter.
Appendix F contains Certificates of Training.
Appendix G contains Asbestos Abatement and Air Sampling Documentation.

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2.0 INSPECTION PROCEDURES and METHOD of SAMPLE COLLECTION and ANALYSIS

2.1 Inspection Procedures

EA Group used field inspectors who were trained in the recognition, sampling, and evaluation of ACM.

Upon arrival, the EA Group inspector conducted a cursory review of the available floor plans to identify those building components that might potentially contain asbestos. This information helped to familiarize the inspector with the building itself, and with the locations of suspect building components

The EA Group inspector then conducted a walk-through inspection of the entire building during which all accessible areas were visually inspected for the presence of suspect ACM. Samples of some suspect materials were also collected and submitted to EA Group's analytical laboratory for analysis. If building areas or components contained suspect materials, standard forms were used to record pertinent information about the material and the building environment.

2.2 Hazard Assessment

The EPA Decision-Tree Process is used to evaluate the then current condition of suspect asbestos-containing building materials and their potential for fiber release. This EPA Decision-Tree Process should also be used during re-inspections to re-evaluate the condition of the friable, known and assumed, asbestos-containing building materials identified during prior inspections. The objective of the Decision-Tree Process is to organize and evaluate pertinent information about asbestos-containing building materials in a systematic and consistent manor. This process provides the inspector with sufficient detail to prescribe specific methods of control (i.e., removal, encapsulation, or enclosure) for the ACMs in the facility.

The Decision-Tree Process allows the inspector to perform a subjective evaluation of a known or suspect material with regard to seven factors. These factors are presented in Table 2-1.

The first three factors focus on the material's condition at the time of the inspection. Evidence of deterioration, delamination, physical damage, or water damage, indicates that fiber release has occurred, is occurring, or is likely to occur in the future. Such evidence is based on the appearance of the material, and/or the presence of dislodged or crumbled material on floors or other horizontal surfaces.

Factors under the second heading reflect the potential for a future fiber release due to disturbance or erosion. Surface erosion is likely to occur when ACM is located in an air plenum or near a forced-air stream. Exposed and easily accessible materials, in locations frequented by building occupants or subject to routine maintenance activities, are more vulnerable to disturbance or damage than materials in other locations.

Tables 2-2 through 2-4, diagram the sequence of the Decision-Tree used by the inspector to organize and gather information for the decision-making process. For example, Table 2-2 presents a summary of the possible conditions of an asbestos-containing building material (i.e., Poor, Fair, Good) with a hazard ranks from 1 to 7 (e.g., 1 being good, 7 being poor). If a material is determined to be in poor condition, and is assigned a hazard rank of 7, immediate action is required as shown in Table 2-4. However, for the remaining six hazard categories, the potential for disturbance is taken into consideration depending on the condition of the material (e.g., good or fair). Table 2-4 is provided to assist in classifying ranks, ACM condition, and potential for ACM disturbance. Depending on the potential for disturbance (i.e., low, moderate, high) specific response actions are required by AHERA as shown in Table 2-4. Table 2-3 is presented to assist in classifying the potential for disturbance into the three categories shown (i.e., low, moderate, high). The hazard ranks generated from these assessment categories were used to determine the appropriate response actions.

2.3 Estimations of Material Quantity

The quantities provided in this report are estimates. While these estimates provide a usable depiction, actual amounts may vary. In addition, where small quantities are involved, a higher, minimum cost may be charged by an asbestos abatement contractor.

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TABLE 2-1. FACTORS FOR ASSESSING POTENTIAL FIBER RELEASE

Current Condition of ACM
• Evidence of deterioration or delamination from the underlying surface (substrata)
• Evidence of physical damage (e.g., presence of debris)
• Evidence of water damage
• Potential for Future Disturbance, Damage, or Erosion of ACM
• Proximity to air plenum or direct air-stream
• Visibility, accessibility (to building occupants and maintenance personnel), and degree of activity (air movement, vibration, movement of building occupants)
• Change in building use

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TABLE 2-2. CLASSIFICATIONS FOR HAZARD POTENTIAL

AHERA Hazard Rank	ACM Condition	Disturbance Potential
7	Poor	Any
6	Fair	High
5	Fair	Moderate
4	Fair	Low
3	Good	High
2	Good	Moderate
1	Good	Low

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TABLE 2-3

CLASSIFICATION OF THE POTENTIAL FOR DISTURBANCE

HIGH POTENTIAL ("Potential for Significant Damage")

MODERATE POTENTIAL ("Potential for Damage")

LOW POTENTIAL

(Evaluation is based on frequency of potential contact, influence of vibration, and potential for air erosion.)

AHERA Definitions

Potential for Damage

(1) Friable ACM is in an area regularly used by building occupants, including maintenance personnel, in the course of their normal activities.

(2) There are indications that there is a reasonable likelihood that the material or its covering will become damaged, deteriorated, or delaminated due to factors such as changes in building use, changes in O&M practices, changes in occupancy, or recurrent damage.

Potential for Significant Damage

Same as potential for damage, plus:

(3) The material is subject to major or continuing disturbance, due to factors including but not limited to, accessibility or, under certain circumstances, vibration or air erosion.

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TABLE 2-4

RESPONSE ACTIONS BASED ON HAZARD RANKINGS

Hazard Rank	Removal Priority	AHERA Categories	Response Actions (Required by AHERA)
7	1	Significantly Damaged	Evacuate or isolate the area if needed. Remove the ACM (or enclose or encapsulate if sufficient to contain fibers). Repair of thermal system insulation is allowed if feasible and safe. O&M required for all friable ACM.
6	2	Damaged w/ Potential for Significant Damage	Evacuate or isolate the area if needed. Remove, enclose, encapsulate, or repair to correct damage. Take steps to reduce potential for disturbance. O&M required for all friable ACM.
5	3	Damaged w/ Potential for Damage	Remove, enclose, encapsulate, or repair to correct damage. O&M required for all friable ACM.
4	4	Damaged w/ Low Potential for Damage	Remove, enclose, encapsulate, or repair to correct damage. O&M required for all friable ACM.
3	5	No Damage w/ Potential for Significant Damage	Evacuate or isolate the area if needed. Take steps to reduce potential for disturbance. O&M required for all friable ACM.
2	6	No Damage w/ Potential for Damage	Take steps to reduce potential for disturbance. Continue O&M for all friable ACM.
1	7	No Damage w/ Low Potential for Damage	Continue O&M for all ACM until Hazard Assessment factors change.

NOTE: EA Group's Hazard Assessment values on Asbestos Inspection Data Sheet forms are essentially the inverse of AHERA's Hazard Rank and mimic AHERA's Removal Priority for greater clarity by directly relating a hazard to an action priority.

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3.0 SUMMARY OF INSPECTION RESULTS

All suspect asbestos materials that were not sampled or otherwise determined to be non-ACM are assumed to be asbestos-containing unless or until tested and shown otherwise. All activities involving these materials should be in strict compliance with the requirements stipulated in AHERA.

The inspection for ACMs was reasonably non-destructive. Therefore, materials located behind walls, above solid ceilings, or in other inaccessible areas may not have been identified, assessed or quantified. If during demolition or renovation additional suspect materials are discovered, these materials should be documented and treated as asbestos-containing, unless tested otherwise.

The inventory of the known and assumed accessible ACMs are summarized on Table 3-1, which also provides estimated costs for abatement.

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Table 3-1

Inventory of
Asbestos-Containing Materials
2016

Table 3-1. Inventory of Known or Assumed ACMs and Removal Cost Estimates 2016 Reinspection
Grounds Building

Group	MATERIAL DESCRIPTION	Material Type	LOCATION	Quantity	Removal Cost
A	2'x4' Ceiling Panel	M	Open Area	160	640
A	2'x4' Ceiling Panel	M	Office w/ Closet	110	440
A	2'x4' Ceiling Panel	M	Restroom	25	100
B	Drywall System	M/NF2	Office w/ Closet	380	1520
B	Drywall System	M/NF2	Restroom	80	320
B	Drywall System	M/NF2	Garage	600	2400
C	12"x12" Floor Tile & mastic	M/NF1	Open Area	190	570
D	4" Cove Base & mastic	M/NF1	Open Area	50 LF	150
D	4" Cove Base & mastic	M/NF1	Office w/ Closet	45 LF	135
E	6" Cove Base & mastic	M/NF1	Restroom	17 LF	51

NOTE: Unit cost ranges for various materials are based on known historical bidding results.
Unit costs and estimated cost totals in this table are estimates only,
and do not represent project specific cost estimates.

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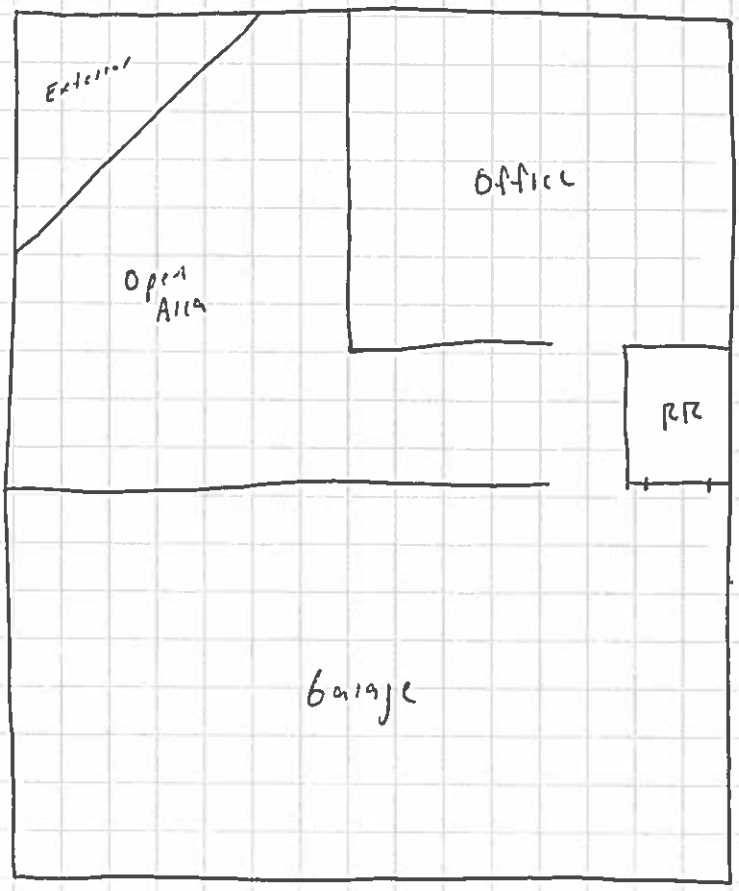
APPENDIX A

SCHOOL FLOOR PLAN(S)

EA GROUP	Work Order: OH40424
	Date: 12/22/16
	Project: 341 AHERA
Title: Grounds Bldg	Prepared By: Kovell



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APPENDIX B

SUSPECT ACM SAMPLING RESULTS
and
LABORATORY REPORT(S)

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APPENDIX C

AHERA THREE-YEAR REINSPECTION SHEET FORMS

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ASBESTOS HAZARD EMERGENCY RESPONSE ACT (AHERA)

THREE-YEAR REINSPECTION

2016

Client: Shaker Heights City School District
3654 Lee Road
Shaker Heights, Ohio 44120

Project: Administration Building
Data/DLMO Building
Service Center
Grounds Building
Bus Garage
Shaker Heights, Ohio

EAG Project: OH40424

November 2016

7118 Industrial Park Boulevard • Mentor, Ohio 44060-5314
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Environmental Analysis and Management

February 17, 2017

Mr. Anthony Ugrinic
Shaker Heights City School District
3654 Lee Road
Shaker Heights, Ohio 44120

RE: **AHERA Three-Year Reinspection - 2016**
Administration, Data/DLMO, Service Center, Grounds, Bus Garage Buildings
Shaker Heights, Ohio
OH40424

Dear Mr. Ugrinic:

EA Group has performed the three-year reinspection of the Administration, Data/DLMO, Service Center, Grounds, and Bus Garage buildings in Shaker Heights, Ohio as required under the Asbestos Hazard Emergency Response Act (AHERA) for 2016. The reinspection included a review of past AHERA inspections performed by Brumbaugh-Herrick, Inc., and available sampling and analysis reports of relevance. Based on this information, room-by-room *Asbestos Inspection Data Sheets* for the building were created to facilitate asbestos management and inspections on an on-going basis. These identify the known asbestos-containing materials (ACM), known non-ACM materials from past sampling events, and assumed ACM, and provide the required Hazard Assessment, which is based on the condition, cause of damage (if present), present disturbance factors, and present potential for damage for each material in each location. The Hazard Assessment relates to a recommended Response Action, as indicated on the sheets.

Enclosed are the results of the reinspections, which should be maintained with the existing AHERA Asbestos Inspection & Maintenance Plans. In addition to the reinspection forms, the inspector's certification, building plans (if available), and blank AHERA Asbestos 6-Month Surveillance Data Sheets are provided.

The majority of materials were considered to be in good condition. Areas where damage was noted are indicated on the *Asbestos Inspection Data Sheets*.

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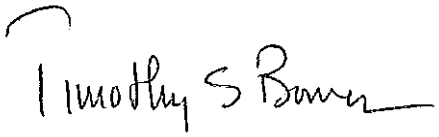
February 17, 2017
Shaker Heights City School District
AHERA Three-Year Reinspection - 2016
Administration, Data/DLMO, Service Center, Grounds, Bus Garage Buildings, Shaker Heights, Ohio
OH40424

If you require any further information, please contact the undersigned. Thank you for consulting EA Group.

Sincerely,

EA Group



Timothy S. Bowen,
Vice President/Technical Director

TSI **Training Services International**

Asbestos Building Inspector Refresher

Certificate

This is to certify

Michael J. Kovell

XXX-XX-5363

has attended and successfully completed the Asbestos Hazard Emergency Response Act mandatory course for the Asbestos Building Inspector Refresher and has passed an examination in that course with a minimum score of 70% or better. Training was in accordance with 40 CFR Part 763 (AHERA). The above student received the requisite training for asbestos accreditation under Title II of the Toxic Substances Control Act and State of Indiana requirements under 326 IAC 18-2 and Chapter 3701-34 Ohio Administrative Code.

Training Manager	Expiration Date	Date(s) of Course	Examination Date	Course Location
Doug D. Schiffer	4/7/17	4/7/16	4/7/16	Cleveland, OH

TSI
33150 Lakeland Blvd.
Cleveland, OH 44095
1-866-666-8438

16 TSI 63311 ir

TSI Training Services International

Asbestos Building Inspector Refresher

Certificate

This is to certify

Christopher Hatfield

XXX-XX-8267

has attended and successfully completed the Asbestos Hazard Emergency Response Act mandatory course for the Asbestos Building Inspector Refresher and has passed an examination in that course with a minimum score of 70% or better. Training was in accordance with 40 CFR Part 763 (AHERA). The above student received the requisite training for asbestos accreditation under Title II of the Toxic Substances Control Act and State of Indiana requirements under 326 IAC 18-2 and Chapter 3701-34 Ohio Administrative Code.

Training Manager	Expiration Date	Date(s) of Course	Examination Date	Course Location
Robert Hletko	11/9/17	11/9/16	11/9/16	Cleveland, OH

TSI
33150 Lakeland Blvd.
Cleveland, OH 44095
1-866-666-8438

Course Certificate No. 16 TSI 65596 ir

EA GROUP	Work Order: OH40424
	Date: 12/22/16
	Project: 341 AHERA
Title: Grounds Bldg	Prepared By: Kovell

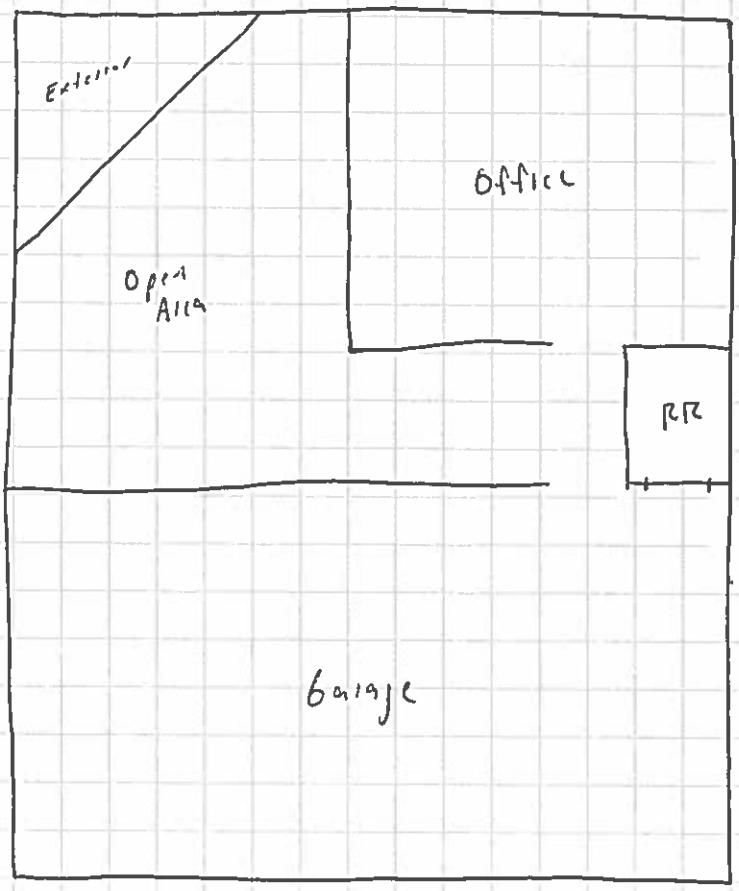


Table 3-1. Inventory of Known or Assumed ACMs and Removal Cost Estimates 2016 Reinspection
Grounds Building

Group	MATERIAL DESCRIPTION	Material Type	LOCATION	Quantity	Removal Cost
A	2'x4' Ceiling Panel	M	Open Area	160	640
A	2'x4' Ceiling Panel	M	Office w/ Closet	110	440
A	2'x4' Ceiling Panel	M	Restroom	25	100
B	Drywall System	M/NF2	Office w/ Closet	380	1520
B	Drywall System	M/NF2	Restroom	80	320
B	Drywall System	M/NF2	Garage	600	2400
C	12"x12" Floor Tile & mastic	M/NF1	Open Area	190	570
D	4" Cove Base & mastic	M/NF1	Open Area	50 LF	150
D	4" Cove Base & mastic	M/NF1	Office w/ Closet	45 LF	135
E	6" Cove Base & mastic	M/NF1	Restroom	17 LF	51

NOTE: Unit cost ranges for various materials are based on known historical bidding results.
Unit costs and estimated cost totals in this table are estimates only,
and do not represent project specific cost estimates.

ASBESTOS INSPECTION DATA SHEET

Client: Shaker Heights City School District | Building: Grounds Building

Project: AHERA Inspection 2016 | Functional Space: As Indicated

LOCATION	Group	ID # OH40424	MATERIAL DESCRIPTION	Quantity [sq. ft. unless noted]	PRIOR HAZARD ASSESSMENT	Material		CAUSE OF DAMAGE				PRESENT DISTURBANCE FACTORS					PRESENT POTENTIAL FOR DAMAGE			Hazard Assess.
						Type	Cond	P	W	D	O	Visible	Accessible	Air Movement Low/Medium/High	Activity Low/Medium/High	Friable	Low Potential Damage (LPD)	Potential Damage (PD)	Potential Significant Damage (PSD)	
Open Area	A	Assumed	2'x4' Ceiling Panel	160	N/A	M	D	X				Y	Y	L	L	Y	X			4
	C	Assumed	12"x12" Floor Tile & mastic	190	N/A	M/NF1	D	X		X		Y	Y	L	M	N	X			4
	D	Assumed	4" Cove Base & mastic	50 LF	N/A	M/NF1	ND					Y	Y	L	L	N	X			7
Office w/ Closet	A	Assumed	2'x4' Ceiling Panel	110	N/A	M	D	X				Y	Y	L	L	Y	X			4
	B	Assumed	Drywall System	380	N/A	M/NF2	ND					N	N	L	L	N	X			7
	D	Assumed	4" Cove Base & mastic	45 LF	N/A	M/NF1	ND					Y	Y	L	L	N	X			7
Restroom	A	Assumed	2'x4' Ceiling Panel	25	N/A	M	ND					Y	Y	L	L	Y	X			7
	B	Assumed	Drywall System	80	N/A	M/NF2	ND					Y	Y	L	L	N	X			7
	E	Assumed	6" Cove Base & mastic	17 LF	N/A	M/NF1	ND					Y	Y	L	L	N	X			7
Garage	B	Assumed	Drywall System	600	N/A	M/NF2	D	X				Y	Y	L	L	N	X			4

MATERIAL TYPE:
- S - Surfacing
- T - Thermal
- M - Miscellaneous
- NF1 - Non-friable Cat. I
- NF2 - Non-friable Cat. II

CONDITION:
- ND - No Damage
- D[d] - Damage, Distributed
- D[l] - Damage, Localized
- SD[d] - Significant Damage Distributed, >10%
- SD[l] - Significant Damage Localized, >25%

HAZARD ASSESSMENT:
- 0 - Non-ACM
- 1 - significantly damaged
- 2 - damaged & potential for significant damage
- 3 - damaged & potential for damage
- 4 - damaged & low potential for damage
- 5 - ND, but potential for significant damage
- 6 - ND, but potential for damage
- 7 - ND w/ low potential for damage

RESPONSE ACTIONS REQUIRED for HAZARD ASSESSMENT NUMBER:

1 - Evacuate or isolate area if needed. Remove ACM [enclose or encapsulate if adequate to contain fibers]. Repair of TSI is allowed if feasible and safe. Continue O&M for all friable ACM.

2 - Evacuate or isolate area if needed. Take steps to reduce potential for disturbance, otherwise abate as soon as possible. Continue O&M for all friable ACM.

3 - Remove, enclose, encapsulate or repair to correct damage. Continue O&M.

4 - Repair damage and take steps to reduce potential for disturbance; continue O&M; plan to abate.

5,6 - Continue O&M; take steps to reduce potential for disturbance of friable ACM.

7 - Continue O&M for all ACM until Hazard Assessment factors change.

P = Physical damage; W = Water damage; D = Deterioration; O = Other (indicate in Comments)

Visible; Accessible; Air Movement Low/Medium/High; Activity Low/Medium/High; **Friable**

Low Potential Damage (LPD); Potential Damage (PD); Potential Significant Damage (PSD)

EA GROUP
7118 Industrial Park Blvd.; Mentor, OH 44060-5314
(440) 951-3514

EAG Technician(s): Mike Kovell ES 34424

Survey Date(s): December 22, 2016

GROUNDS BUILDING **AHERA ASBESTOS 6-MONTH PERIODIC SURVEILLANCE DATA SHEET**

Inspected by: Survey Date(s):

CONDITION: G = Good; D = Damaged; SD = Significantly Damaged

LOCATION	GROUP	MATERIAL DESCRIPTION	Quantity	Material Type	Material Condition			Describe Change
					G	D	SD	
Open Area	A	2'x4' Ceiling Panel	160	M				
Open Area	C	12"x12" Floor Tile & mastic	190	M/NF1				
Open Area	D	4" Cove Base & mastic	50 LF	M/NF1				
Office w/ Closet	A	2'x4' Ceiling Panel	110	M				
Office w/ Closet	B	Drywall System	380	M/NF2				
Office w/ Closet	D	4" Cove Base & mastic	45 LF	M/NF1				
Restroom	A	2'x4' Ceiling Panel	25	M				
Restroom	B	Drywall System	80	M/NF2				
Restroom	E	6" Cove Base & mastic	17 LF	M/NF1				
Garage	B	Drywall System	600	M/NF2				

Only rooms/areas w/ known/assumed ACMs listed. If suspect ACMs found/installed in other areas, they should be noted here and in Plan for later inclusion in Three-Year Reinspection and 6-mos forms.

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APPENDIX D

AHERA ASBESTOS 6-MONTH PERIODIC SURVEILLANCE DATA SHEET FORMS

GROUNDS BUILDING **AHERA ASBESTOS 6-MONTH PERIODIC SURVEILLANCE DATA SHEET**

Inspected by: Survey Date(s):

CONDITION: G = Good; D = Damaged; SD = Significantly Damaged

LOCATION	GROUP	MATERIAL DESCRIPTION	Quantity	Material Type	Material Condition			Describe Change
					G	D	SD	
Open Area	A	2'x4' Ceiling Panel	160	M				
Open Area	C	12"x12" Floor Tile & mastic	190	M/NF1				
Open Area	D	4" Cove Base & mastic	50 LF	M/NF1				
Office w/ Closet	A	2'x4' Ceiling Panel	110	M				
Office w/ Closet	B	Drywall System	380	M/NF2				
Office w/ Closet	D	4" Cove Base & mastic	45 LF	M/NF1				
Restroom	A	2'x4' Ceiling Panel	25	M				
Restroom	B	Drywall System	80	M/NF2				
Restroom	E	6" Cove Base & mastic	17 LF	M/NF1				
Garage	B	Drywall System	600	M/NF2				

Only rooms/areas w/ known/assumed ACMs listed. If suspect ACMs found/installed in other areas, they should be noted here and in Plan for later inclusion in Three-Year Reinspection and 6-mos forms.

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PART II

BUILDING MANAGEMENT PLAN

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4.0 ASSURANCE

4.1 Statement of Compliance

I, _____, the LEA Designated Person for Grounds Building do hereby certify that to the best of my knowledge the School's responsibility as stated in 40 CFR Part 763, and as summarized in this section, are being met as stipulated in the Asbestos Hazard Emergency Response Act (AHERA).

_____

Signature- LEA Designated Person

4.2 Training

The required training for employees will be provided by Grounds Building.

- Grounds Building will ensure, prior to the implementation of the O&M program, that all members of its maintenance and custodial staff who work in buildings that contain asbestos-containing building materials receive asbestos awareness training of at least two hours whether or not they are required to work with asbestos-containing building materials. New custodial and maintenance employees will be trained within 60 days after commencement of employment.

- Grounds Building will ensure, prior to the implementation of the O&M program, that all members of its maintenance staff who conduct any activities that will result in the disturbance of asbestos-containing building materials receive the training as described in the paragraph above, plus fourteen additional hours of training.

4.3 Notification

4.3.1 Grounds Building will ensure that all employees, workers, parent employee organizations, building occupants and/or their legal guardians will be informed at least once each school year about inspections, response actions and post response action activities, including periodic reinspection and surveillance activities that are planned or in progress. Notices to employees, building occupants, and/or their legal guardians will be distributed annually.

4.3.2 Grounds Building will ensure that short-term workers (e.g. telephone repair workers, utility workers, exterminators, etc.) who are likely to come in contact with asbestos-containing building materials are provided information regarding the location of asbestos-containing building materials, and materials assumed to contain asbestos in their intended work areas. (Non-LEA employees should sign the Asbestos Inspection & Management Plan acknowledging receipt of this information prior to the start of any work.)

4.3.3 Grounds Building will ensure that warning labels are posted in all routine custodial/maintenance areas in accordance with 40 CFR Part 763.95.

4.3.4 Grounds Building will ensure that proper notification is given as to the existence of their Asbestos Inspection & Management Plan, as provided in 40 CFR Part 763.93(g). The Asbestos Inspection & Management Plan will be available for public review in the school office (for that particular school only), during normal business hours. If requested, copies of the Asbestos Inspection & Management Plan will be submitted to the interested parties within five working days from the date of request. The school will charge a reasonable cost to make copies.

4.4 Designated Person

Grounds Building will ensure that prior to the implementation of the Management Plan, the school's Designated Person receives adequate training to perform the duties assigned to him/her under AHERA. Training will include the following five topics: 1) health effects of asbestos; 2) detection, identification, and assessment of ACM; 3) options for controlling ACM; 4) asbestos management programs; and, 5) relevant Federal and State regulations.

4.5 Conflict of Interest

Grounds Building will address the possible conflicts of interest which could result between parties providing services to the school when assisting with AHERA compliance. The following possible conflicts will be considered:

- The asbestos consulting company hired by the school to assure compliance with the AHERA regulations should be independent of the contractor hired to perform abatement activities.
- Air sample analyses as required by AHERA to determine abatement completion will be performed independently of the company and/or persons providing the abatement services.

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5.0 SCHOOL LIST

This Asbestos Inspection & Management Plan applies to those buildings used in the daily operation of the following school:

- Grounds Building
  3644 Lee Road
  Shaker Heights, Ohio

The following categories of ACM are present in the building(s) of Grounds Building:

	Yes	No
Friable ACM	**X**	
Friable Assumed ACM	**X**	
Non-Friable ACM	**X**	
Non-Friable Assumed ACM	**X**	

The complete inventory of suspected ACM identified in the Grounds Building facilities is presented in Table 3-1 of the inspection report. The inspection report is presented in Part I of this document.

6.0 RECORDKEEPING

Any asbestos activities, including preventive measures, response actions, employee training, cleaning, fiber release episodes, or operations and maintenance activities conducted after the initial survey, will be kept in or filed with this AHERA Asbestos Inspection & Management Plan.

7.0 CURRENT INSPECTION

The complete inventory of suspect asbestos-containing building materials identified during the development of the 2017 Asbestos Inspection and Management Plan for Grounds Building is presented in Part I (Sections 1 to 3) of this document. Documentation for the original inspection and any subsequent inspections for ACMs at the Grounds Building are maintained on file and area available for review. All inspections after 2016 will be maintained within this document, in Appendix C.

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8.0 LEA DESIGNATED PERSON

The person designated by Grounds Building to ensure that Section 763.84 of the AHERA regulation (40 CFR Part 763) is properly implemented will be:

Name: _____

Address: 3644 Lee Road, Shaker Heights, Ohio

Telephone: _____

Course Name:

Course Location: _____

Course Dates: ___/___/___ and ___/___/___

A Designated Person/O&M Worker Training course was designed to train persons to serve as the school's Designated Person as well as perform maintenance duties which may disturb asbestos-containing building materials. This course provided an in-depth discussion of the following topics.

- Health effects associated with asbestos exposure.
- Detection, identification, and assessment of ACM.
- Options for controlling ACM.
- Relevant Federal and State regulations (including those specified in AHERA).
- Information regarding asbestos and its various uses and forms.
- Locations of ACM identified throughout each building in which they work.
- Recognition of damage, deterioration, and delamination of ACM.
- The location and availability of the management plan.
- Descriptions of the proper methods of handling of ACM.
- Information on the use of respiratory protection (as specified in AHERA).
- Hands-on trains in the use of respiratory protection, other personal protection measures, and good work practices.

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RESPONSE

ACTIONS

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RESPONSE ACTION 1

MATERIAL TYPE

Damaged or significantly damaged thermal system insulation (TSI) ACM.

RESPONSE ACTION

1. At least repair the damaged area.

2. Remove the damaged material if it is not feasible, due to technological factors, to repair the damage.

3. Maintain all thermal system insulation ACM and its covering in an intact state and undamaged condition

Note: Response actions including removal, encapsulation, enclosure, or repair, other than small-scale, short duration repairs, shall be designed and conducted by persons accredited to design and conduct response actions. All response action activities shall be performed by individuals with the appropriate level of training and expertise to conform with AHERA requirements.

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RESPONSE ACTION 2

MATERIAL TYPE

Damaged friable surfacing ACM or damaged friable miscellaneous ACM

RESPONSE ACTION

Can select from the following response actions:

- Encapsulation
- Enclosure
- Removal
- Repair

Note: Response actions including removal, encapsulation, enclosure, or repair, other than small-scale, short duration repairs, shall be designed and conducted by persons accredited to design and conduct response actions. All response action activities shall be performed by individuals with the appropriate level of training and expertise to conform with AHERA requirements.

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RESPONSE ACTION 3

MATERIAL TYPE

Significantly damaged friable surfacing ACM or significantly damaged friable miscellaneous ACM

RESPONSE ACTION

1. Immediately isolate the functional space and restrict access, unless isolation is not necessary to protect human health and the environment.

2. Remove the material in the functional space or, depending upon whether enclosure or encapsulation would be sufficient to protect human health and the environment, enclose or encapsulate.

Note: Response actions including removal, encapsulation, enclosure, or repair, other than small-scale, short duration repairs, shall be designed and conducted by persons accredited to design and conduct response actions. All response action activities shall be performed by individuals with the appropriate level of training and expertise to conform with AHERA requirements.

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RESPONSE ACTION 4

MATERIAL TYPE

Friable surfacing ACM, thermal system insulation ACM, or friable miscellaneous ACM that is in good condition but has ***potential for damage***

RESPONSE ACTION

At least implement an operations and maintenance (O&M) program

Note: Response actions including removal, encapsulation, enclosure, or repair, other than small-scale, short duration repairs, shall be designed and conducted by persons accredited to design and conduct response actions. All response action activities shall be performed by individuals with the appropriate level of training and expertise to conform with AHERA requirements.

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RESPONSE ACTION 5

MATERIAL TYPE

Friable surfacing ACM, thermal system insulation ACM, or friable miscellaneous ACM that is in good condition but has ***potential for significant damage***

RESPONSE ACTION

1. Implement an O&M program

2. Institute preventive measures to eliminate the reasonable likelihood that the ACM or its covering will become significantly damaged, deteriorated, or delaminated.

3. Remove the material as soon as possible if appropriate preventive measures cannot be effectively implemented, or unless other response actions are determined to protect human health and the environment. Immediately isolate the area and restrict access if necessary to avoid an imminent and substantial endangerment to human health and the environment.

Note: Response actions including removal, encapsulation, enclosure, or repair, other than small-scale, short duration repairs, shall be designed and conducted by persons accredited to design and conduct response actions.

EA GROUP
Environmental Analysis and Management

9.0 LEA ASSURANCE OF ACCREDITATION

Grounds Building will use only EPA accredited persons for AHERA related activities including inspections, management planning, response action design and implementation, O&M or response action procedures greater than small scale short duration, and periodic (3 year) reinspections.

Grounds Building may use unaccredited two-day trained personnel to perform small-scale, short-duration operations as defined in Appendix B to Subpart E of the Asbestos Hazard Emergency Response Act (AHERA). However, any scope of work greater than that described in Appendix B to Subpart E must be designed and conducted by accredited personnel.

Grounds Building may use unaccredited two-day trained personnel for the repair of damage caused by minor fiber release episodes (the falling or dislodging of 3 square or linear feet or less of friable ACM). However, accredited personnel must and will be used to design and conduct response actions for any major fiber release episode (the falling or dislodging of more than 3 square or linear feet of friable ACM) (769.91f).

LEA Designated Person _____

Signature _____

Date _____

The accreditation documents for the personnel used to develop this Asbestos Inspection & Management Plan are enclosed. Those persons used for other asbestos services at Grounds Building will submit their certificates of accreditation to the school. These certificates will be maintained in the asbestos Inspection/ Management Plan file.

For each preventive measure and response action taken after March 2017, the following information will be documented and maintained in the school file.

I. Detailed description of the action

a) Methods used
b) Location of measure or action
c) Start and completion date
d) Names and addresses of all Contractors involved
e) Accreditation agency (State and EPA approved)
f) Accreditation number
g) Storage and disposal site if ACM was removed

II. The name and signature of any person collecting Final Clearance Air samples.

III. Information about air samples:

a) Date of collection
b) Name and address of laboratory analyzing samples
c) Date of analysis
d) Results of analysis
e) Method of analysis
f) Name and signature of person performing analysis
g) Laboratory accreditation statement

10.0 ACM REMAINING FOLLOWING INITIAL RESPONSE ACTIONS

Most of the asbestos-containing building materials identified in Grounds Building and described in Table 3-1 of the inspection report are in good condition and in a non-friable state, and no initial response actions are required [ANY EXCEPTIONS ARE NOTED ON THE ASBESTOS INSPECTION DATA SHEET FORMS IN APPENDIX C AND SHOULD BE ADDRESSED AS APPROPRIATE]. As ACM is removed during response actions, O&M, or small-scale short-duration activities, inventory sheets shall be updated and documentation associated with these activities shall be kept on file in an organized fashion.

11.0 REINSPECTION SCHEDULE

Grounds Building will visually reinspect all areas identified in the Asbestos Inspection & Management Plan as asbestos-containing, and will document any "change in condition" every six (6) months. The person performing the surveillance will be required to record the date of surveillance, his/her name, and any changes in the material's condition. The surveillance reports must be submitted to LEA Designated Person, and be included as a part of the records in the current Asbestos Inspection & Management Plan.

Reinspections will be conducted every three (3) years by an EPA-accredited Inspector (Asbestos Hazard Evaluation Specialist). The reinspection will assess any changes in the physical appearance of the asbestos-containing building material, and will serve as the new asbestos inspection.

Documentation of six (6)-month periodic surveillance inspections and three (3)-year reinspections will be maintained in the school office Asbestos Inspection & Management Plan file. At a minimum, the documentation will include the name and date of the surveillance/reinspection, any changes in the material condition noted, and recommended response actions to correct the damaged materials noted.

12.0 O&M PROGRAM

Grounds Building will implement an operations, maintenance, and repair (O&M) program per 40 CFR 763.91 for all known and assumed friable asbestos-containing building materials. Materials identified as non-friable will be treated as friable if the material becomes friable during future building or maintenance operations.

The O&M Program can be implemented through the school's maintenance and custodial staff and/or an accredited asbestos abatement contractor. The O&M program will include training, cleaning, work practices, periodic inspections, and fiber release episode reporting.

The O&M Program is designed to accomplish the following:

1) To clean up asbestos fibers previously released.
2) To prevent future releases by minimizing disturbance or damage to asbestos-containing building materials.
3) To monitor the condition of asbestos-containing building materials. The O&M Program should be established for this building and should continue until all such materials have been removed.

The primary elements of an O&M Program are as follows:

1) Documenting the exact location and condition of asbestos-containing building materials. This Asbestos Inspection & Management Plan provides this documentation.
2) Training of all maintenance and custodial personnel in special work practices to be applied when handling or working around ACM.
3) If necessary, performing an initial cleaning of all building areas near friable ACM. Wet cleaning and HEPA-filtered vacuum techniques should be used.
4) Re-inspecting all ACM and re-assessing the condition of these materials periodically as specified in the management plan for this building.

All O&M activities will be reported on standardized forms. The form to be completed will vary if the O&M activity is performed by properly trained in-house school personnel or by a licensed asbestos abatement contractor. Records of each O&M activity will be maintained in the school's asbestos file.

The following information about O&M small-scale, short duration maintenance activities performed after March 2017 will be documented and maintained in the school file:

- Name of each person performing the operation
- Start and completion date of activity
- Location where activity occurred
- Description of the activity, including preventive measures used
- If ACM was removed, the name and location of the storage or disposal site.

12.1 O&M Work Practices

Grounds Building will ensure that the following work practices are used when performing operations and maintenance (O&M) activities involving small scale ACM abatement:

1) Restrict entry to the work area of persons other than those necessary to perform the maintenance project. This will be done by physically isolating the area or by scheduling of personnel.
2) Post signs to prevent entry by unauthorized persons.
3) Restrict sources of air movement, including shutting off the air handling system or temporarily modifying air supply diffuser and returns.
4) Use work practices or other control methods, such as wet methods, protective clothing, HEPA vacuums, mini-enclosures and glove bags, for cleaning the work area and to inhibit the spread of any released asbestos fibers.
5) Wet clean all fixtures, components and horizontal surfaces in the immediate area of concern.
6) Place ACM debris and cleaning materials in a sealed and leak-tight container, properly labeled with an affixed asbestos warning tag.
7) Prior to initiation of work, submit an asbestos Work Permit for repairs which involve the disturbance of ACM or assumed ACM. A copy of the permit is attached. The permits are to be submitted to the Designated Person of the LEA, who will review the permit, physically inspect the area, and issue or deny the work permit.

Small scale asbestos O&M work may be performed by trained (16-hour) in-house maintenance personnel or by accredited asbestos abatement contractors. Major repair or removal will always be conducted by accredited asbestos contractors who will observe all laws and

regulations and AHERA. O&M small-scale, short duration maintenance activities are tasks such as, but not limited to:

a. Removal of asbestos-containing insulation on pipes.
b. Removal of small quantities of asbestos-containing insulation on beams or above ceilings.
c. Replacement of an asbestos-containing gasket on a valve.
d. Installation or removal of a small section of drywall.
e. Installation of electrical conduits through or proximate to ACM.
f. Removal of small quantities of ACM only if required in the performance of another maintenance activity not intended as asbestos abatement.
g. Removal of asbestos-containing thermal system insulation not to exceed amounts greater than those which can be contained in a single glove bag.
h. Minor repairs to damaged thermal system insulation which does not require removal.
i. Repairs to or drilling into asbestos-containing wallboard or plaster.
j. Repairs involving encapsulation, enclosure, or removal, to small amounts of friable ACM only if required in the performance of emergency or routine maintenance activity and not intended solely as asbestos abatement. Such work may not exceed amounts greater than those which can be contained in a single prefabricated mini-enclosure. Such an enclosure shall conform spatially and geometrically to the localized work area, in order to perform its intended containment function.

OPERATIONS AND MAINTENANCE (O&M) ASBESTOS WORK PERMIT

(in-house asbestos work)

(SCHOOLS MUST COMPLETE THIS FORM EACH TIME THEIR EMPLOYEE WORKS WITH ASBESTOS)

1) TYPE OF ASBESTOS WORK ACTIVITY:
CLEAN ___ REPAIR ___ REMOVE ___ ENCAPSULATE ___ ENCLOSE ___ ISOLATE ___

2) AMOUNT OF MATERIAL TO BE DISTURBED:

____ Less than three (3) square or three (3) linear feet.
____ Small Scale Repair (individual repairs each less than (3) square or linear feet)
____ Cleaning

3) EMPLOYEES NAME: _____
(THE PERSON DOING THE WORK) (PRINT)

4) SUPERVISORS NAME: _____
(DESIGNATED PERSON) (PRINT)

5) DATE & TIME OF THE WORK: DATE: ___/___/___ **TIME:** FROM _____ TO _____

6) LOCATION: SCHOOL NAME _____ BUILDING _____
ADDRESS _____

BASEMENT____ GROUND FLOOR ____ 2ND____ 3RD____ 4TH____

CLASSROOM ____ (#)	STAIRWELL ____	LIBRARY ____	HALLWAY ____
CAFETERIA ____	KITCHEN ____	AUDITORIUM ____	LOUNGE ____
GYMNASIUM ____	LOCKER RM.(B) ____	LOCKER RM.(G) ____	OFFICE ____
MUSIC RM .____	LAVATORY (B) ____	LAVATORY (G) ____	CUSTODIAL RM ___
TUNNEL ____	BOILER RM .____	STORAGE RM .____	OTHER _____

7) WORK METHODS: WET METHOD ____ HEPA VACUUM ____ GLOVEBAG ____
CONTAINMENT ____ RESTRICTED ACCESS ____ POSTED SIGNS ____
SHUT DOWN OR MODIFIED HEATING AND VENTILATING SYSTEM ____

8) TYPE OF MATERIAL: Thermal ____ (pipe, boiler, etc.) Surfacing ____ (sprayed/troweled) Miscellaneous ____ (floor tile, ceiling tile, etc.)

9) WORK DESCRIPTION AND RATIONALE: _____

_____

_____

_____

10) WASTE STORAGE OR DISPOSAL SITE: _____

11) TRAINING: (there must be a yes answer to these questions to approve work)
Employee has received asbestos training (2hr Awareness and 14hr O&M)? ____
Employee has had an OSHA asbestos medical exam during the last year? ____
Employee was provided all necessary equipment to work with asbestos? ____

12) WORK PERMIT APPROVED: ____ (yes) ____ (no)

SIGNATURE _____ **DATE** ___/___/___
(SUPERVISOR /DESIGNATED PERSON)

CONTRACTED ASBESTOS ABATEMENT PROJECT WORK PERMIT

(Schools must complete this form for each contracted asbestos project)

SCHOOL NAME _____ **BUILDING NAME** _____
ADDRESS _____

1) TYPE OF ACTIVITY:
CLEAN ___ REPAIR ___ REMOVE ___ ENCAPSULATE ___ ENCLOSE ___ ISOLATE ___

2) AMOUNT OF MATERIAL DISTURBED: TOTAL FOOTAGE: _____ Sq. Ft / Ln. Ft.
Less than (3) square or (3) linear feet. ____ Greater than (3) square or (3) linear feet. ____

3) CONTRACTOR: NAME _____
ADDRESS _____

4) CONTRACTOR'S ASBESTOS LICENSE # _____ EXPIRATION DATE ___/___/___

5) DATE OF THE WORK ACTIVITY: START ___/___/___ STOP ___/___/___

6) EPA NOTIFICATION COMPLETE _____ (yes) **ODH NOTIFICATION COMPLETE _____** (yes)

7) LOCATION: BASEMENT___ GROUND FLOOR ____ 2ND___ 3RD___ 4TH___

CLASSROOM ____ (#)	STAIRWELL ____	LIBRARY ____	HALLWAY ____
CAFETERIA ____	KITCHEN ____	AUDITORIUM ____	LOUNGE ____
GYMNASIUM ____	LOCKER RM.(B) ____	LOCKER RM.(G) ____	OFFICE ____
MUSIC RM .____	LAVATORY (B) ____	LAVATORY (G) ____	CUSTODIAL RM .___
TUNNEL ____	BOILER RM .____	STORAGE RM .____	OTHER _____

8) CONTRACTOR'S PROJECT SUPERVISOR: _____ ODH#_____

9) CONTRACTOR'S PROJECT WORKERS (ALL): _____

10) WORK METHODS: WET METHOD ____ HEPA VACUUM ____ GLOVEBAG ____
CONTAINMENT ____ RESTRICTED ACCESS ____ POSTED SIGNS ____
SHUT DOWN OR MODIFIED HEATING AND VENTILATING SYSTEM ____

11) TYPE OF MATERIAL: Thermal ____ (pipe, boiler, etc.) Surfacing ____ (sprayed/troweled) Miscellaneous ____ (floor tile, ceiling tile, etc.)

12) WORK DESCRIPTION AND RATIONALE: _____

13) FINAL CLEARANCE AIR SAMPLING AND VISUAL INSPECTION:
Person performing final visual inspection: _____
Visual inspection date: ___/___/___
(final clearance air samples are required for projects greater than 3 feet)
Laboratory (name & address) _____
Person that collected the samples: _____
Sample collection date: ___/___/___ **Sample analysis date** ___/___/___
SAMPLE TYPE: PCM ___ TEM ___ Method NIOSH 7400 AGGRESSIVE
Sample Results: 1) _____ 2) _____ 3) _____ 4) _____ 5) ____

14) WASTE DISPOSAL SITE _____

SIGNATURE _____ **DATE** ___/___/___
(School's Designated Person)

Contracted Asbestos Abatement Project

Date ___/___/___

(PAPERWORK CHECKLIST)

SCHOOL NAME _____ **BUILDING NAME** _____

ADDRESS _____

(The school must obtain a copy of the following items from the contractor or laboratory and keep them on file for each and every contracted asbestos project.)

CONTRACTOR

1) Contractor's Liability Insurance _____
2) Performance Bond (if required) _____
3) Contractor's Worker Compensation Certificate _____
4) Contractor's Asbestos Abatement License _____
5) Ohio Department of Health Notification _____
6) EPA Notification (NESHAP) _____
7) Affidavit of Contractor _____
8) Waste Transport Manifests _____
9) Landfill Disposal Papers _____
10) Workers' Training Certificates
(for each and every worker and supervisor) _____
11) Workers' Medical Papers
(for each and every worker and supervisor) _____
12) Workers' Safety and Health Agreement Forms
(for each and every worker and supervisor) _____
13) Contractor's Work-site Entry and Exit Log _____
14) Contractor's Progress Reports (daily) _____
15) Contractor's OSHA Air Sampling Reports _____
16) Certification of Final Visual Inspection
(This form should include: The location and date of final visual inspection, and signatures of the contractor and laboratory that performed it. _____

LABORATORY

17) Independent Clearance Air Sample Reports (applies to all Response Actions)
(The school must use an independent laboratory. Do not allow the contractor to hire this lab. The school must hire and pay for the lab. You must have a minimum of FIVE (5) samples each less than 0.01 fibers per cubic centimeter.
(This report will come from the lab and must include: The sample results; the dates of collection and analysis; the signatures of the persons that performed sample collection and sample analysis; and the locations of the sampling pumps). _____

18) Independent Daily Air Monitoring Reports _____

CERTIFICATION OF VISUAL INSPECTION

SCHOOL NAME _____

ADDRESS _____

_____

WORK AREA LOCATION _____

_____

_____

_____

CONTRACTOR'S CERTIFICATION

In accordance with all federal, state and local laws, regulations, codes, standards and requirements and any more stringent criteria agreed upon, the contractor hereby certifies that they have visually inspected the work area (all surfaces including pipes, beams, ledges, walls, ceiling and floor, Decontamination Unit, sheet plastic, etc.) and have found no dust, debris or residue.

by (Signature) _____ Date ___/___/___

(Print Name) _____

(Print Title) _____

INDEPENDENT PROFESSIONAL AIR SAMPLING LABORATORY'S CERTIFICATION

The Independent Professional Air Sampling Laboratory hereby certifies that they have accompanied the contractor on a visual inspection and verifies that this inspection has been thorough and to the best of their knowledge and belief, the contractor's certification above is a true and honest one.

by (Signature) _____ Date ___/___/___

(Print Name) _____

(Print Title) _____

SAFETY AND HEALTH AGREEMENT FORM

(this form or equivalent)

Employee's Name: _____ Soc. Sec. No._____

Employer: _____

Employee's Training Classification: _____

I _____ , understand that the work
(employee)

project at: _____
_____
_____

(the "Project") scheduled to begin _____ _____ involves the abatement
(month) (year)

of asbestos-containing material and that asbestos is a hazardous substance. Additionally, I understand that my employer has agreed to supply all the necessary medical monitoring services, training, personal protective equipment and working conditions necessary to protect my health and safety during my employment on the "Project".

Specifically, I represent to _____
(school)

that I have received the necessary safety and health services, as required by Federal, State, local law, prior to my commencement of work at the "Project" including but not limited to the following safety and health services:

1. A free physical examination in the past year by a physician, and a printed copy of the asbestos Medical Surveillance Program.
2. Training in the following subjects:
   (a) History, properties and uses of asbestos; (b) Recognition of asbestos, including its physical characteristics; (c) Health hazards, including the relationships between asbestos exposure, smoking, and disease; (d) Worker protection, including respirator protection, protective clothing, safety equipment, air monitoring, medical surveillance, and personal hygiene; (e) A detailed description of respirators and their use and care, including the degree of protection afforded, fitting and testing procedures, and maintenance and cleaning; (f) Work practices including area preparation, decontamination and waste disposal; (g) Worker right of access to medical records and records required to be maintained by employer; (h) Requirements, procedures, and standards established by 40 CFR Part 763, and appropriate state, local and Board statutes and regulations;
3. Personal instruction and training on the proper use and fit testing of respirators and instruction on the limitations of their use and a written handout describing the purpose and standard operating procedures for the selection, use, care, and inspection of respirators.

I further represent that I will comply with all Federal, State and local laws and regulations pertaining to the safety and health procedures affecting my work activities on the "Project".

Sign: _____ Date _____ Sign: _____ Date _____

Employee Employer

12.2 Training

All the maintenance and custodial staff of Grounds Building will receive a two-hour training session on asbestos awareness prior to implementation of the O&M provisions of the management plan (40 CFR 763.92). New employees will be trained within sixty days after employment. Documentation of personnel training will include at minimum the name; date of training, location of training, and the number of training hours completed.

Two-hour training will include the following:

1) Information on asbestos uses and occurrence.
2) Information on the health effects of asbestos exposure.
3) Locations of ACM identified in the building.
4) Information to recognize damage, deterioration and delamination of ACM.
5) Name, telephone number and location of the LEA designated person.
6) Location and availability of the AHERA Inspection - Management Plan.

All the maintenance staff of Grounds Building will receive 14 additional hours of training if in the performance of their duties they are likely to disturb asbestos-containing building materials. Documentation of this training will be as described in the paragraph above.

The additional 14-hour training will include the following:

1) Description of the proper handling of ACM.
2) Information on the use of respiratory equipment as contained in the EPA/NIOSH Guide to Respiratory Protection for the Asbestos Abatement Industry.
3) The provisions of 40 CFR part 763.92 and Appendices A, B, C, and D of Subpart E, 40 CFR part 763, Subpart G, and in 40 CFR, Part 6, Subpart M, and OSHA regulations contained in 20 CF 1926.58.
4) Hands-on training in the use of respiratory protection, other personnel protective measures, and good work practices.
5) Hands-on training in the use of glove-bags and other specialized tools and equipment of the trade to address the ACM at the school.

12.3 Minor Fiber Release Episode

Using properly trained personnel, Grounds Building will ensure that the procedures described below are followed in the event of a minor fiber release episode (i.e., the falling or dislodging of 3 square or linear feet or less of a friable ACM):

1) Thoroughly saturate the debris using wet methods.
2) Clean the area, using wet methods and HEPA vacuuming.
3) Place the asbestos debris in a sealed, leak tight container, and affix warning tag.
4) Repair the area of damaged ACM with materials such as asbestos-free spackling, cement, plaster, re-wettable cloth, or insulation, or seal with an approved encapsulant or latex paint.

12.4 Major Fiber Release Episode

Grounds Building will ensure that the procedures described below are followed in the event of a major fiber release episode (i.e., the falling or dislodging of more than 3 square or linear feet of friable ACM).

1) Restrict entry into the area and post signs to prevent entry into the area by persons other than those necessary to perform the response action.
2) Shut off or temporarily modify the air handling system to prevent the distribution of fibers to other areas in the building.
3) The response action for major fiber release episodes will be designed by persons accredited to design response actions and conducted by persons accredited to conduct response actions.

When a major asbestos activity is performed, the following must be documented and maintained in the school file:

- Name, signature, state of accreditation, certificate number of each person performing the activity.
- Start and completion date of the activity.
- Location where activity occurred.
- A description of the activity, including preventive measure used.
- If ACM was removed, the name and location of storage disposal sites.

For each fiber release episode the LEA must document and maintain in the school office file the following:

- Date and location of the episode.
- Method of repair, preventive measures taken, or response actions taken.
- Name of each person performing the work.
- The name and location of the storage and disposal site, if ACM is removed.

ASBESTOS FIBER RELEASE EPISODE

DATE __/__/__

(ACCIDENTAL OR UNCONTROLLED)

1) AMOUNT OF MATERIAL INVOLVED:

____ Less than three (3) square or three (3) linear feet. (MINOR)
____ Greater than three (3) square or three (3) linear feet. (MAJOR)
(EPISODES INVOLVING MORE THAN THREE (3) SQUARE OR THREE LINEAR FEET MAY NOT BE RESPONDED TO BY 16 HR. O&M TRAINED PERSONNEL)

2) DATE AND TIME OF EPISODE:

DATE: ___/___/___
TIME: _____

3) LOCATION: SCHOOL NAME _____ BUILDING NAME _____
ADDRESS _____
_____

BASEMENT____ GROUND FLOOR ____ 2ND____ 3RD____ 4TH____

CLASSROOM ____ (#)	STAIRWELL ____	LIBRARY ____	HALLWAY ___
CAFETERIA ____	KITCHEN ____	AUDITORIUM ____	LOUNGE ____
GYMNASIUM ____	LOCKER RM.(B) ____	LOCKER RM.(G) ____	OFFICE ____
MUSIC RM .____	LAVATORY (B) ____	LAVATORY (G) ____	CUSTODIAL RM .___
TUNNEL ____	BOILER RM .____	STORAGE RM .____	OTHER _____

4) TYPE OF MATERIAL:

Thermal ____	Surfacing ____	Miscellaneous ____
(pipe, boiler, etc.)	(sprayed or troweled)	(floor tile, ceiling tile, etc.)

5) EPISODE DESCRIPTION AND RATIONALE: _____
_____
_____
_____

6) EPISODE RESPONSE:

Evacuated Area ____ Sealed Off Area _____ Restricted Access _____
Posted Signs ____ Shut Down or Modified Ventilation Systems (heat, AC, etc.) _____

7) ISSUED WORK PERMIT: O & M _____ Contractor _____
(If the episode involves more than three (3) feet of material, a certified asbestos contractor must be used.)

SIGNATURE _____ **DATE ___/___/___**
(DESIGNATED PERSON)

13.0 NOTIFICATION

School Employees
Building Occupants or Their Legal Guardians
Parent, Teacher, Employee Organization

All school employees, workers, building occupants or their legal guardians and parent, teacher, and employee organizations will be informed at least once each school year concerning the availability of the Asbestos Inspection & Management Plan, the location and times for its review, inspection, response actions, and post-response action activities, including periodic reinspections and surveillance activities that are planned or in progress. Yearly notices must be sent even if there is no evidence of asbestos in the building.

This information will be distributed in the form of a letter and a dated copy letter will be kept in the Asbestos Inspection & Management Plan file.

Contractors/Short Term Workers

All contractors and short-term workers who may come in contact with asbestos in the school, such as telephone repair workers, utility workers and such, will be informed of the locations of the ACM or assumed ACM in the building prior to commencement of work activities.

The contractor or short-term worker will be required to review a copy of the Asbestos Inspection & Management Plan, (specifically Table 3-1) relating to their proposed work activities. Prior to commencement of work, the contractor or short-term worker will be required to verify their review and understanding by signing the Asbestos Inspection & Management Plan.

14.0 COMMUNICATION PLAN

The following sample letter, or some similar letter, will be distributed by Grounds Building once each year, and a dated copy will be maintained on file. Additionally, Grounds Building will attach to this letter a list of the asbestos abatement projects, if any, that the school undertook in the past year; and a list of the asbestos abatement projects, if any, planned for the near future. This letter provides information about the availability of the Asbestos Inspection & Management Plan, the location and times for its review, inspections, response actions, and post-response action activities, including periodic reinspections and surveillance activities that are planned or in progress. A yearly notice will be sent even if there is no evidence of asbestos in the building.

The following is an example of the letter that can be completed and distributed.

To: Employees, Parents, Parent & Teacher Organizations, Building Occupants or their Legal Guardians

From: Grounds Building

Subj: Asbestos Inspection & Management Plan

Date: ___/ ___/ ___

Dear Sir/Madam,

Federal law required all schools to inspect their buildings for ACM and to develop Management Plans for those materials found. Our school contracted EA Group to conduct an Asbestos Inspection and to develop an Asbestos Management Plan.

The Asbestos Inspection & Management Plan is available for your review, by appointment, during our regular business hours. If you wish to see the report, please contact the school office for an appointment. All appointment requests will be honored within five (5) working days of their receipt. A written copy of the Asbestos Inspection & Management Plan can be made available upon written request, for the cost of reproduction.

Our school's maintenance and custodial staff has received specialized asbestos training and will visually survey the school's asbestos-containing building materials every six (6) months. Furthermore, a complete re-inspection by an EPA accredited inspector will occur every three (3) years. Copies of these inspections can also be made available for your review.

If our school requires an asbestos abatement larger than small scale short duration, only an EPA accredited asbestos contractor will be used. Attached, you will find a list of the asbestos abatement projects, if any, that our school undertook this past year, and a list of the asbestos abatement projects, if any, planned for the near future.

Please be assured that we are concerned with your safety and will make every effort to comply with all laws and regulations pertaining to asbestos.

Sincerely,

School Administrator

15.0 RESOURCE EVALUATION

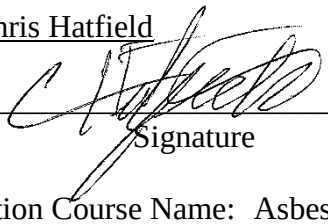
Grounds Building will budget in a timely manner the necessary resources to complete any recommended response actions sufficiently to protect human health and environment as required by the Asbestos Hazard Emergency Response Act (40 CFR Part 763.93).

EA GROUP
Environmental Analysis and Management

16.0 MANAGEMENT PLAN CONTRIBUTIONS

The following accredited individual contributed to the development of the Asbestos Inspection & Management Plan for Grounds Building. The certificate for this person follows.

Name: Chris Hatfield



_____ Date _03_/_22_/_17_
Signature

Accreditation Course Name: Asbestos Building Inspector /
Asbestos Management Planner

Training:

Initial Training:	Training Services International	
Certificate Numbers:	BI-	11 TSI 41442 ii
	MP-	11 TSI 41508 mpi
Refresher Training:	Training Services International	
Certificate Numbers:	BI-	16 TSI 65596 ir
	MP-	16 TSI 65626 mpr

State AHES Number: 35398

EA GROUP
Environmental Analysis and Management

17.0 COMPLIANCE TO GENERAL RESPONSIBILITIES

AHERA ASBESTOS HAZARD EMERGENCY RESPONSE ACT

Shaker Heights City School District
Grounds Building

SPECIAL PROVISION
CERTIFICATION
763.93i

COMPLIANCE TO GENERAL RESPONSIBILITIES:

I hereby certify that this Local Educational Agency (LEA)

Shaker Heights City School District
[District Name]

has complied with U.S. Environmental Protection Agency regulation 40 CFR 763, Subpart E; has completed the required inspections, prepared their asbestos management plan; and have met the general requirements of this regulation.

The above statement is true and correct to the best of my knowledge:

by _____ on _____, _____.
(SIGNATURE OF LEA DESIGNATED PERSON)

TYPED NAME _____

TITLE _____

18.0 GLOSSARY

Asbestos - the asbestiform varieties of: chrysotile, crocidolite, amosite, anthophyllite, tremolite, and actinolite.

Asbestos-Containing Material (ACM) - any material or product containing more than one (1) percent asbestos.

Condition of Surfacing and Miscellaneous Material:

A. Poor Condition (equivalent to "significantly damaged")

Material with one or more of the following characteristics:

1. Surface crumbling or blistering over at least one tenth of the surface if the damage is evenly distributed (one quarter if damage is localized).
2. Large areas of material hanging from the surface, delaminating, or showing adhesive failure.
3. Water stains, gouges, or mars over at least one tenth of the surface if the damage is evenly distributed (one quarter if the damage is localized)

Accumulation of powder, dust, or debris similar in appearance to the suspect material on surfaces beneath the material can be used as confirmatory evidence.

B. Fair Condition (equivalent to "damaged")

Material with the following characteristics:

1. The surface crumbling, blistered, water-stained, gouged, marred or otherwise abraded over less than one tenth of the surface if the damage is evenly distributed (one quarter if the damage is localized).

Accumulation of powder, dust, or debris similar in appearance to the suspect material on surfaces beneath the material can be used as confirmatory evidence.

C. Good Condition

Material with no visible damage or deterioration, or very limited damage or deterioration.

Condition of Thermal System Insulation:

A. Poor Condition (equivalent to "significant damage")

Material with one or more of the following characteristics:

1. Mostly missing jacket
2. Crushed, heavily gouged or punctured insulation on at least one tenth of pipe runs/risers if the damage is evenly distributed (one quarter if the damage is localized).

Accumulation of powder, dust, or debris similar in appearance to the suspect material on surfaces beneath the pipe/boiler/tank/etc. can be used as confirmatory evidence.

B. Fair Condition (equivalent to "damaged")

Material with the following characteristics:

1. A few water stains or sections of missing jackets.
2. Crushed insulation or water stains, gouges, punctures, or mars, on up to one tenth of the insulation if the damage is evenly distributed (or up to one quarter if the damage is localized).

C. Good Condition

Material with no visible damage or deterioration, or very limited damage or deterioration.

Encapsulation - treatment of ACM with a material that surrounds or embeds asbestos fibers in an adhesive matrix to prevent the release of fibers, as the encapsulant creates a membrane over the surface (bridging encapsulant) or penetrates the material and binds its components together (penetrating encapsulant).

Enclosure - an airtight, impermeable, permanent barrier around ACM to prevent the release of asbestos fibers into the air.

Fiber Release Episode - any uncontrolled or unintentional disturbance of ACM resulting in a visible emission.

Friable - material, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure, and includes previously non-friable material after such previously non-friable material becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure.

Functional Space - a room, group of rooms, or homogeneous area (including crawl spaces or the space between a drop ceiling and the floor or roof deck above), such as classroom(s), cafeteria, gymnasium, hallway(s), designated by a person accredited to prepare management plans, design abatement projects, or conduct response actions.

Homogeneous Area - an area of surfacing material, thermal system insulation, or miscellaneous material that is uniform in color and texture.

Miscellaneous Material - interior building material on structural components, structural members or fixtures, such as floor and ceiling tiles, and does not include surfacing material or thermal system insulation.

Non-friable - material in a school building which when dry may not be crumbled, pulverized, or reduced to powder by hand pressure.

Operations and Maintenance Program - a program of work practices to maintain friable ACM in good condition, ensure clean up of asbestos fibers previously released, and prevent further release by minimizing and controlling friable ACM disturbance or damage.

Potential for disturbance:

A. <u>Potential for contact with the material</u>

High	Service workers work in the vicinity of the material more than once per week. (and/or) The material is in a public area (e.g., hallway, auditorium etc.) and accessible to building occupants.
Moderate	Service workers work in the vicinity of the material once per week to once per month. (and/or) The material is in a room or office and accessible to the occupants.
Low	Service workers work in the vicinity of the material less than once per month. (and/or) The material is visible but not within reach of building occupants.

B. Influence of vibration

High	Loud motors or engines present (e.g., some fan rooms). (and/or) Intrusive noises or easily sensed vibrations (e.g., major airports, a major highway).
Moderate	Motors or engines present but not obtrusive (e.g., ducts vibrating but no fan in the area). (and/or) Occasional loud sounds (e.g., a music room)
Low/None	None of the above

C. Potential for air erosion

High	High velocity air (e.g., elevator shaft, fan room).
Moderate	Noticeable movement of air (e.g., air shaft, ventilator air steam).
Low/None	None of the above

Removal - taking out or the stripping of substantially all ACM from a damaged area, a functional space, or a homogeneous area in a school building.

Repair - returning damaged ACM to an undamaged condition or to an intact state so as to prevent fiber release.

Response Action - a method, including removal, encapsulation, enclosure, repair, operations and maintenance, that protects human health and the environment from friable ACM.

Routine Maintenance Area - an area, such as a boiler room or mechanical room, that is not normally frequented by students and in which maintenance employees or contract workers regularly conduct maintenance activities.

Surfacing Material - material in a school building that is sprayed-on, troweled on, or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, or other purposes.

Thermal System Insulation - material in a school building applies to pipes, fittings, boilers, breeching, tanks, ducts, or other interior structural components to prevent heat loss or gain, or water condensation, or for other purposes.