Nantucket High School
10 Surfside Road
Nantucket, Massachusetts

AHERA 3-Year RE-INSPECTION REPORT

July 2023

PREPARED FOR:

Nantucket Public Schools
12 Surfside Road
Nantucket, Massachusetts
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Introduction

The Vertex Companies, Inc. (VERTEX) conducted a 3-Year Reinspection on June 29th, 2023 as required by the 40 CFR 763 Asbestos Hazard Emergency Response Act (AHERA) at the Nantucket High School located at 10 Surfside Road in Nantucket, Massachusetts. The AHERA regulation requires that each Local Education Agency (LEA) retain a certified/accredited Asbestos Inspector to conduct an initial inspection of all friable and non-friable known or assumed asbestos-containing materials (ACMs) in each school building that they lease, own, or otherwise uses as a school building. The AHERA re-inspection is to be performed by an accredited inspector at least once every three years from the time of implementation of the original management plan. In addition, the LEA is responsible for conducting Six-Month Periodic Surveillance Inspections as required to effectively manage the identified ACMs in place within the school.

The Nantucket Public School District may utilize the information obtained from the AHERA inspection to effectively manage the ACMs identified within the Nantucket High School.

SECTION 1

INSPECTION REPORT

Section 1
Inspection Report

Inspection Protocol

Massachusetts Department of Labor Standards (DLS) Certified Asbestos Inspector, Jason Mohre (AI#000262) performed the AHERA inspection. The Management Plan was updated by Massachusetts DLS Certified Asbestos Management Planner, Jason Mohre (AP#000080). The purpose of the inspection was to identify friable and non-friable ACMs and perform a hazard assessment. As required by the AHERA regulation, the inspection survey procedures must include a visual inspection and assessment of the condition of all known locations of friable and non-friable ACMs. It should be noted that under the AHERA regulations only ACMs are inspected within the school building, other ACMs may be associated with the school that do not fall under AHERA asbestos-containing building materials (ACBMs) definition. Examples of materials which have been found to contain asbestos include but are not limited to exterior window caulking, window glazing, and roofing material. Prior to school renovations any suspect materials not sampled or listed within the school's AMP, must be tested prior to disturbance. Furthermore, VERTEX recommends an ACMs Survey be conducted prior to any renovation activities to comply with the Environmental Protection Agency (EPA) Title 40 CFR Part 61, National Emissions Standards for Hazardous Air Pollutants (NESHAPs) and the Massachusetts Department of Environmental Protection Regulations. Documentation for subsequent surveys not related to AHERA should be included in the overall Management Plan.

Assessment of potential asbestos hazards is subject to each individual inspector's judgment, and as a result, hazard assessments may vary.

Furthermore, the LEA Designated Person should assume that there are other potential ACBMs located under flooring materials, behind walls and ceilings not accessible. Any renovation/demolition work that may penetrate these areas should be inspected prior to disturbance.

All available documentation of asbestos abatement projects, which have occurred since the initial AHERA inspection should be included with the Management Plan for the school.

The previous 3-Year Reinspections was conducted by VERTEX in July 2020 and Rhode Island Analytical (RI Analytical) in October 2017. Based on review of the past RI Analytical 3-Year Reinspection Report, VERTEX noted that a majority of the ACBMs had been assumed and laboratory data was not included within the October 2017 report and current Asbestos Management Plan for the school.

Appendix F contains Certification Page for the Inspector and Management Planner involved with the inspection of the school.

Locations of the identified ACBMs with quantities observed, conditions assessed, homogeneous hazard assessment are presented in Appendix A of this report.

Section 1
Inspection Report (continued)

Bulk Sampling Methodology

Bulk samples were not collected during the current re-inspection activities in June 2023. However, VERTEX had collected and analyzed the following bulk samples of suspect homogeneous materials within the facility during an AHERA inspection conducted in July 2020. Please refer to Table 1 below for a summary of the bulk samples collected and analyzed.

10 Surfside Road
Sample Locations and Results
Table I

Sample Number	Sample Description	Sample Location	Asbestos Content
B-710-01A	Yellow Carpet Adhesive	1st Floor, Auditorium	None Detected
B-710-01B	Yellow Carpet Adhesive	1st Floor, 143	None Detected
B-710-02A	12" Dark Gray Spec Floor Tile	Lower Level Hall	None Detected
B-710-02B	12" Dark Gray Spec Floor Tile	1st Floor, Gym/Auditorium Hall	None Detected
B-710-03A	Black Floor Tile Mastic	Lower Level Hall	None Detected
B-710-03B	Black Floor Tile Mastic	1st Floor, Gym/Auditorium Hall	None Detected
B-710-03C	Black Floor Tile Mastic	1st Floor, Guidance Corridor	None Detected
B-710-03D	Black Floor Tile Mastic	2nd Floor, 201-208 Hall	None Detected
B-710-04A	12" Gray Spec Floor Tile	Lower Level, 010	None Detected
B-710-04B	12" Gray Spec Floor Tile	2nd Floor, 206	None Detected
B-710-05A	**Black Floor Tile Mastic**	**Lower Level, 010**	**10 % Chrysotile**
B-710-05B	Black Floor Tile Mastic	2nd Floor, 206	None Detected
B-710-05C	**Black Floor Tile Mastic**	**Lower Level, 008**	**10 % Chrysotile**
B-710-05D	Black Floor Tile Mastic	Lower Level, 015	None Detected
B-710-05E	**Black Floor Tile Mastic**	**1st Floor, Cafeteria**	**10 % Chrysotile**
B-710-06A	12" Off-White Gray Spec Floor Tile	Lower Level, 005	None Detected
B-710-06B	12" Off-White Gray Spec Floor Tile	2nd Floor, 207	None Detected
B-710-07A	Yellow Floor Tile Mastic	Lower Level, 005	None Detected
B-710-07B	Yellow Floor Tile Mastic	2nd Floor, 207	None Detected
B-710-07C	Yellow Floor Tile Mastic	1st Floor, 109	None Detected
B-710-08A	12" Off-White Black Spec Floor Tile	1st Floor, 102	None Detected
B-710-08B	12" Off-White Black Spec Floor Tile	1st Floor, 102	None Detected
B-710-09A	Black Floor Tile Mastic	1st Floor, 102	None Detected
B-710-09B	Black Floor Tile Mastic	1st Floor, 102	None Detected
B-710-10A	12" Off-White Beige Spec Floor Tile	Lower Level, 001	None Detected
B-710-10B	12" Off-White Beige Spec Floor Tile	Lower Level, 004	None Detected
B-710-11A	Yellow Floor Tile Mastic	Lower Level, 001	None Detected
B-710-11B	Yellow Floor Tile Mastic	Lower Level, 004	None Detected
B-710-12A	12" Brown Spec Floor Tile	1st Floor, 129	None Detected
B-710-12B	12" Brown Spec Floor Tile	1st Floor, 129	None Detected
B-710-13A	Yellow Floor Tile Mastic	1st Floor, 129	None Detected
B-710-13B	Yellow Floor Tile Mastic	1st Floor, 129	None Detected
B-710-14A	12"Light Blue Spec Floor Tile	1st Floor, Boiler Room Entry	None Detected
B-710-14B	12"Light Blue Spec Floor Tile	1st Floor, Boiler Room Entry	None Detected
B-710-15A	Black Ramp Tread	1st Floor, Ramp to Shop Area	None Detected
B-710-15B	Black Ramp Tread	1st Floor, Ramp to Shop Area	None Detected
B-710-16A	Yellow Ramp Tread Adhesive	1st Floor, Ramp to Shop Area	None Detected
B-710-16B	Yellow Ramp Tread Adhesive	1st Floor, Ramp to Shop Area	None Detected
B-710-17A	Gray Covebase	Lower Level, 010	None Detected
B-710-17B	Gray Covebase	2nd Floor, 204	None Detected

10 Surfside Road
Sample Locations and Results
Table I (Continued)

Sample Number	Sample Description	Sample Location	Asbestos Content
B-710-18A	Black Covebase	Lower Level, 004	None Detected
B-710-18B	Black Covebase	2nd Floor, 217	None Detected
B-710-19A	Yellow Covebase Adhesive	Lower Level, 010	None Detected
B-710-19B	Yellow Covebase Adhesive	2nd Floor, 217	None Detected
B-710-20A	Ceramic Wall Tile Adhesive (Yellow)	1st Floor, Men's Room by Lobby	None Detected
B-710-20B	Ceramic Wall Tile Adhesive (Yellow)	1st Floor, Men's Room by 106	None Detected
B-710-21A	Ceramic Wall Tile Grout (White)	1st Floor, Men's Room by Lobby	None Detected
B-710-21B	Ceramic Wall Tile Grout (White)	1st Floor, Men's Room by 106	None Detected
B-710-22A	Drywall	Lower Level, 010	None Detected
B-710-22B	Drywall	1st Floor, 102-107 Hall	None Detected
B-710-22C	Drywall	2nd Floor, 204	None Detected
B-710-23A	Joint Compound	Lower Level, 010	None Detected
B-710-23B	Joint Compound	Lower Level, 009	None Detected
B-710-23C	Joint Compound	1st Floor, Administration Hall	None Detected
B-710-23D	Joint Compound	1st Floor, Cafeteria	None Detected
B-710-23E	Joint Compound	1st Floor, Auditorium	None Detected
B-710-23F	Joint Compound	1st Floor, 102-107 Hall	None Detected
B-710-23G	Joint Compound	1st Floor, Shop Hall	None Detected
B-710-23H	Joint Compound	2nd Floor, 204	None Detected
B-710-23I	Joint Compound	2nd Floor, 217	None Detected
B-710-24A	Building Caulking (Gray)	1st Floor, Lobby	None Detected
B-710-24B	Building Caulking (Gray)	2nd Floor, 201-208 Hall	None Detected
B-710-25A	Interior Door Caulking (Gray)	1st Floor, 109-117 Hall	None Detected
B-710-25B	Interior Door Caulking (Gray)	2nd Floor, 211-217 Hall	None Detected
B-710-26A	Black Sink Mastic	Lower Level, 010	None Detected
B-710-26B	Black Sink Mastic	1st Floor, 109	None Detected
B-710-26C	Black Sink Mastic	1st Floor, Men's Dressing Room	None Detected
B-710-27A	White Sink Mastic	1st Floor, 102	None Detected
B-710-27B	White Sink Mastic	1st Floor, 102	None Detected
B-710-28A	Emergency Generator Exhaust Breeching Insulation	1st Floor, Emergency Generator Room	None Detected
B-710-28B	Emergency Generator Exhaust Breeching Insulation	1st Floor, Emergency Generator Room	None Detected
B-710-28C	Emergency Generator Exhaust Breeching Insulation	1st Floor, Emergency Generator Room	None Detected
B-710-29A	Laboratory Hood Panel Material	2nd Floor, 202	None Detected
B-710-29B	Laboratory Hood Panel Material	2nd Floor, 204	None Detected
B-710-30A	Green Duct Mastic	1st Floor, Emergency Generator Room	None Detected
B-710-30B	Green Duct Mastic	1st Floor, Emergency Generator Room	None Detected
B-710-31A	2' x 2' Ceiling Tile (Fissure/Dot)	Lower Level Hall	None Detected
B-710-31B	2' x 2' Ceiling Tile (Fissure/Dot)	1st Floor, Gym/Auditorium Hall	None Detected
B-710-32A	2' x 2' Ceiling Tile (Speckled/Dot)	1st Floor, Lobby	None Detected
B-710-32B	2' x 2' Ceiling Tile (Speckled/Dot)	2nd Floor, 201-208 Hall	None Detected

10 Surfside Road
Sample Locations and Results
Table I (Continued)

Sample Number	Sample Description	Sample Location	Asbestos Content
B-710-33A	2' x 2' Ceiling Tile (Dot)	Lower Level, LGI 020	None Detected
B-710-33B	2' x 2' Ceiling Tile (Dot)	Lower Level, LGI 020	None Detected
B-710-34A	2' x 2' Ceiling Tile (Fissure/Dot)-Replacements	2nd Floor, 217	None Detected
B-710-34B	2' x 2' Ceiling Tile (Fissure/Dot)-Replacements	2nd Floor, 201-208 Hall	None Detected
B-710-35A	Spray-on Fireproofing	Lower Level Hall	None Detected
B-710-35B	Spray-on Fireproofing	Lower Level, 021	None Detected
B-710-35C	Spray-on Fireproofing	1st Floor, 102-107 Hall	None Detected
B-710-35D	Spray-on Fireproofing	1st Floor, Guidance Corridor	None Detected
B-710-35E	Spray-on Fireproofing	1st Floor, Gym/Auditorium Hall	None Detected
B-710-35F	Spray-on Fireproofing	1st Floor, Music Hall	None Detected
B-710-35G	Spray-on Fireproofing	1st Floor, Shop Hall	None Detected
B-710-35H	Spray-on Fireproofing	2nd Floor, 201-208 Hall	None Detected
B-710-35I	Spray-on Fireproofing	2nd Floor, 204	None Detected

Bold indicates representative bulk sample analyzed positive for Asbestos (>1% asbestos containing)
Positive Stop indicates representative bulk sample analyzed positive for Asbestos.

Section 1
Inspection Report (continued)

The following is a list of materials that were determined or assumed to be asbestos-containing:

Black Floor Tile Mastic
Wood Flooring Materials

The following is a list of materials that were found and determined to be non-asbestos:

Yellow Carpet Adhesive
12" Gray Spec Floor Tile
12" Off-White Black Spec Floor Tile
12" Brown Spec Floor Tile
Yellow Floor Tile Mastic
Yellow Ramp Tread Adhesive
Black Covebase
Ceramic Wall Tile Adhesive (Yellow)
Drywall
Building Caulking (Gray)
Black Sink Mastic
Laboratory Hood Panel Material
2' x 2' Ceiling Tile (Fissure/Dot)
2' x 2' Ceiling Tile (Dot)
Spray-on Fireproofing
Emergency Generator Exhaust Breeching Insulation
12" Dark Gray Spec Floor Tile
12" Off-White Gray Spec Floor Tile
12" Off-White Beige Spec Floor Tile
12"Light Blue Spec Floor Tile
Black Ramp Tread
Gray Covebase
Yellow Covebase Adhesive
Ceramic Wall Tile Grout (White)
Joint Compound
Interior Door Caulking (Gray)
White Sink Mastic
Green Duct Mastic
2' x 2' Ceiling Tile (Speckled/Dot)
2' x 2' Ceiling Tile (Fissure/Dot)-Replacements

VERTEX recommends an ACMs Survey be conducted prior to any renovation activities to comply with the EPA Title 40 CFR Part 61, NESHAPs and the Massachusetts Department of Environmental Protection Regulations.

Section 1
Inspection Report (continued)

Updated Hazard Assessment

Each ACM homogeneous area is assessed to determine the asbestos hazard. Factors considered when assessing homogeneous area hazard include: the friability of the material, the condition of material including type, severity, and extent of damage, the material's potential for disturbance (including accessibility and air flow) and the material's potential for damage. From this classification, a decision tree is used to determine the appropriate response action sufficient to protect human health and environment.

The location, estimated quantities, condition and Homogenous Area Hazard Assessment Category for the identified ACMs are presented in Appendix A. The following is homogenous area assessment for each ACM identified.

Homogeneous Area Assessment

Homogeneous Area #1-Black Floor Tile Mastic

Classification: Non-Friable Miscellaneous ACBM

Asbestos-containing Black Floor Tile Mastic was identified within the Lower Level Rooms 008 and 010 as well as the 1st Floor Cafeteria under 12" Non-Asbestos Containing Floor Tile. It should be noted it appears several other areas (i.e. hallways) a different non-asbestos containing Black Floor Tile mastic was utilized. VERTEX recommends additional sampling and analysis of all black floor tile mastic prior to disturbance.

Homogeneous Area #2– Wood Flooring Materials

Classification: Non-Friable Miscellaneous ACBM

Assumed asbestos-containing Wood Flooring Materials are assumed to be located under the Gym Area at the school. The Wood Flooring Materials are covered, non-friable and presents a potential for damage. Prior to any activity that may disturb the Wood Flooring Materials proper sampling and analysis should be conducted.

SECTION 2

RESPONSE ACTION DETERMINATION

Section 2
Response Action Determination

The recommended response actions are determined utilizing the "decision tree" approach for Response Action Determination as outlined in EPA's "Asbestos Hazard Emergency Response Act," (AHERA) 40 CFR 763. Because of defined friability factors associated with surfacing and miscellaneous materials versus thermal system insulation, separate decision trees are utilized for each group of materials.

Decision Trees are used to estimate the risk associated with exposure to asbestos in a given homogeneous area, and to recommend certain response actions, which are consistent with regulatory requirements. Eight response actions are recommended for surfacing/miscellaneous insulation. The response section number given to each homogeneous area indicates a priority for action, the lower the number, the more serious the hazard. Most response actions call for an operations and maintenance program, assuming that this is the least burdensome method which still protects human health and environment. This does not prohibit the building owner from removal of ACM at any time, if that is the preferred response action.

Recommended response actions are based upon the material condition, disturbance, air-flow and the potential for damage. Potential response actions include the following:

1. Friable Surfacing or Miscellaneous ACM with Significant Damage: **Response Action 1:** Isolate the area and restrict access to the area. Remove the ACM as soon as possible.
2. Friable Surfacing or Miscellaneous ACM with Damage and a High Disturbance: **Response Action 2:** Continue with O&M Program and remove ACM as soon as possible or reduce the potential for disturbance.
3. Friable Surfacing or Miscellaneous ACM with Damage, Moderate Disturbance and in the Presence of an Air Stream: **Response Action 2:** Continue with O&M Program and remove ACM as soon as possible or reduce the potential for disturbance.
4. Friable Surfacing or Miscellaneous ACM with Damage and Moderate Disturbance: **Response Action 3:** Continue with O&M Program and schedule removal when practical and cost-effective
5. Friable Surfacing or Miscellaneous ACM with Damage, Low Disturbance and in the Presence of an Air Stream: **Response Action 4:** Continue with O&M Program and schedule removal when practical and cost-effective
6. Friable Surfacing or Miscellaneous ACM with Damage and Low Disturbance: **Response Action 5.** Continue with O&M Program and schedule removal when practical and cost-effective
7. Friable Surfacing or Miscellaneous ACM with No Damage and High Disturbance: **Response Action 6.** Take preventative measures to reduce the disturbance.
8. Friable Surfacing or Miscellaneous ACM with No Damage and Moderate Disturbance: **Response Action 7.** Take preventative measure to reduce the disturbance.
9. Friable Surfacing or Miscellaneous ACM with No Damage and Low Disturbance: **Response Action 8.** Take preventative measure to reduce the disturbance.
10. Non-Friable Surfacing or Miscellaneous ACM: **Response Action 8:** Continue with O&M until major renovation or demolition requires removal under the EPA NESHAPS, or until hazard assessment factors change.

Section 2
Response Action Determination (continued)

Advantages and Disadvantage to Abatement Alternatives

The decision trees outlined in AHERA 40 CFR 763 are used to provide the "best" alternative for the specific conditions in each homogeneous area.

Below is a discussion of the alternative approaches to asbestos management in a building.

Long Term Operation & Maintenance Program

Advantages:

*Low initial cost for implementation
*Good interim plan
*An O&M program may be implemented and carried out by in house trained personnel.

Disadvantages:

*Asbestos remains in the building
*Condition of the asbestos must be monitored
*Cost of training and special work procedures may be significant
*Effectiveness may be limited where control of the building occupants is difficult

Encapsulation

Advantages:

*Reduces the risk of release of asbestos fibers
*Initial cost is lower than the cost of asbestos removal
*Asbestos-containing material may still serve its initial purpose
*Quick temporary means of repair

Disadvantages:

*Asbestos remains in the building and encapsulant makes removal more difficult
*Improper encapsulation may cause the material to delaminate or pull away from substrate
*Asbestos-containing material must have an O&M program
*Similar preparation for asbestos removal is required for encapsulation
*Long term cost may be greater than asbestos removal is periodic reapplication of the encapsulant is required

Section 2
Response Action Determination (continued)

Enclosure

Advantages:

*Enclosure reduces immediate exposure
*Initial cost of enclosure is lower that the cost of asbestos removal
*Asbestos-containing material may still serve its initial purpose
*Quick temporary means of repair

Disadvantages:

*Asbestos remains in place and later removal is more difficult
*If maintenance is required of the systems insulated with asbestos, the asbestos will be exposed
*An O&M program will have to be implemented for the asbestos-containing material
*Similar preparation for asbestos removal is required for enclosure

Removal

Advantages

*Asbestos-containing material is eliminated from the building
*There is no need for an O&M plan
*Initial cost is great, but the future costs are eliminated

Disadvantages:

*Re-insulating, re-fireproofing, or replacement of materials may be required
*Improper removal may raise levels of airborne fibers higher than background levels
*The initial cost of removal is very high
*Areas of the building involved in asbestos removal may not be occupied during removal

SECTION 3

UPDATED RECOMMENDED RESPONSE ACTIONS

Section 3
Recommended Response Actions

The recommended response actions are for all the homogenous areas found within the school. The response actions are determined utilizing the decision tree approach for Response Action Determination as described in Section 2.

Homogeneous Area #1-Black Floor Tile Mastic

Response Action 8: The Asbestos-containing Black Floor Tile Mastic was identified within the Lower Level Rooms 008 and 010 as well as the 1st Floor Cafeteria under 12" Non-Asbestos Containing Floor Tile. It should be noted it appears several other areas (i.e. hallways) a different non-asbestos containing Black Floor Tile mastic was utilized. VERTEX recommends additional sampling and analysis of all black floor tile mastic prior to disturbance. Continue the Operations and Maintenance (O&M) Program and manage the material in place until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change.

Homogeneous Area #2– Wood Flooring Materials

Response Action 8: The Wood Flooring Materials are assumed to be located under the Gym Area at the school. Continue the O & M Program and manage the material in place until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change. The Wood Flooring Materials are assumed asbestos-containing. Sampling and analysis of the Wood Flooring Materials is required to be conducted prior to disturbance.

SECTION 4

RECORDKEEPING REQUIREMENTS AND RECOMMENDATIONS

Section 4
Recordkeeping Requirements and Recommendations

The AHERA regulations have very specific requirement for the maintenance of records associated with the management of the identified ACMs in the school. The following is a list of some of the key items that the LEA Designated Person must maintain as part of the package:

- Initial AHERA inspection report and Asbestos Management Plan
- Subsequent 3-year reinspection reports.
- 6-month surveillance reports.
- Documentation for minor and major fiber release episodes. This includes abatement work performed by outside contractors as well as work performed by 16 hour trained maintenance personnel no matter how small.
- Documentation for completion of response actions (i.e. clearance testing, waste shipment records, etc.). This should always include applicable training and certification documentation for the parties involved performing the work activities.
- Labeling of ACBM (friable)
- Yearly notice to parents, teachers and staff.
- Training and medical exams for 16-hour trained personnel. Although training does not require renewal. Medicals are to be performed every year. In addition, 16-hour personnel should be fit tested every six months.
- Two-hour awareness training for staff. Any new workers are required to receive this training at start of employment. Training should include specific review of ACBMs in the building their working in.

The above items are some of the key items, which need to be incorporated into the plan. The following are some recommendations are how best to maintain for easy access and review by outside parties:

- Maintain an update the three- ring binder for the school. Have a duplicated copy, one for administration office and one for the facilities office.
- Create tab sections in the binder. Each section should contain the information above. This will allow for easy review and update.
- Ensure that for every major and minor fiber release episode, that all documentation is received.
- As you updated your file, ensure the school's is updated.

Section 4
Recordkeeping Requirements and Recommendations (continued)

Also, it is also required that if outside contractors enter building perform work that they review areas where asbestos may be present that will be near their work. Have a log at the school for them to sign that they have read and understand. This will protect the school from liability and ensure outside contactors will not disturb asbestos. Finally, periodically review program internally and with your 16-hour persons to ensure compliance.

Asbestos-containing Black Floor Tile Mastic was identified within the Lower Level Rooms 008 and 010 as well as the 1st Floor Cafeteria under 12" Non-Asbestos Containing Floor Tile. It should be noted it appears several other areas (i.e. hallways) a different non-asbestos containing Black Floor Tile mastic was utilized. VERTEX recommends additional sampling and analysis of all black floor tile mastic prior to disturbance.

VERTEX recommends implementing a periodic cleaning schedule with properly trained staff (i.e. 2-Hour Asbestos Awareness) utilizing HEPA-vacuums.

A required six-month periodic surveillance inspection should be scheduled for January 2024.

VERTEX recommends an ACMs Survey be conducted prior to any renovation activities to comply with the EPA Title 40 CFR Part 61, NESHAPs and the Massachusetts Department of Environmental Protection Regulations.

SECTION 5

ESTIMATED RESOURCES REQUIRED TO COMPLETE THE RESPONSE ACTIONS

Section 5
Estimated Resources Required to Complete the Response Actions

This section contains the estimated resources required to complete the abatement activities of the identified damaged ACBMs. These estimates will vary according to competitive bidding, accessibility, location, and condition of ACMs, phasing of work, etc. The cost estimate below does not include abatement contactor mobilization, abatement design and/or project monitoring services.

Estimated Cost to complete the Response Actions at the Nantucket High School:

$0.00*

**The estimated cost provided above does not include costs that may be associated with two-hour asbestos awareness training, OSHA 16-hr Operations and Maintenance Training, and/or the labor to conduct the required six-month surveillance re-inspections. Please refer below for estimated costs that may be associated with the mentioned above:

2-Hour Asbestos Awareness Training = $75/person
OSHA 16-hr Operations and Maintenance Training = $300/person
Six-Month Periodic Surveillance Inspection = $400/inspection

SECTION 6

ESTIMATED RESOURCES REQUIRED FOR THE ABATEMENT OF THE IDENTIFIED ACBMs

Section 6
Estimated Resources Required For Abatement of the Identified ACMs

This section contains the estimated resources required to perform the removal of identified ACMS, however EPA recommends the ACBMs to be managed in place if they are not damaged. Alternative abatement costs are estimated using current Abatement Contractor Estimates. These estimates will vary per competitive bidding, accessibility, location, and condition of ACMs, phasing of work, etc. The cost estimate below is a worst-case scenario if all identified ACMs were to be removed. The cost estimate below does not include abatement contactor mobilization, abatement design and/or project monitoring services.

Estimated Cost for the Removal of ACBMs from the Nantucket High School:

$96,360.00*

Cost Estimate Worksheet can be found in Appendix C.

*The estimated cost above does not include removal of potentially concealed ACMs within the interior of the school. In addition, the estimated cost provided above does not include abatement of potential ACMs on the exterior of the site building and/or beyond the AHERA inspection.

** The estimated cost provided above is developed from current Abatement Contractor Unit pricing. These estimates will vary according to competitive bidding, accessibility, location, and condition of ACMs, phasing of work, etc. In addition, the costs above do not include mobilization of the Abatement Contractor, Abatement Work Plan/Design, Project Monitoring and/or Clearance Testing Services for the completion of the response actions. Please refer for below unit pricing regarding costs for the Contractor Mobilization and Clearance Testing Services:

Abatement Work Plan/Design Specification = $500-$2,500.00
Abatement Contactor Mobilization = $1,500.00-$2,500.00
Project Monitoring/Clearance Testing = $520.00-$600.00/per shift
Transmission Electron Microcopy (TEM) Analysis = $75.00-$100.00/sample
Phase Contrast Microscopy (PCM) Analysis = No Charge -$15.00/sample
Clearance Report Preparation = $350.00-$800.00

SECTION 7

OPERATIONS AND MAINTENANCE

Section 7
Operations and Maintenance Program

INTRODUCTION

The Nantucket Public School District has established an overall asbestos control program that is designed to minimize exposure of all occupants of the school to asbestos fibers located at the Nantucket High School. This Operations and Maintenance (O&M) Plan is an integral part of the overall program. It sets guidelines for the proper in-place management of all assumed and identified asbestos-containing building materials (ACBM) located in the building.

This O&M plan contains the following sections:

A. A description of the **duties of the LEA Designated Person (DP).**

B. A procedure for **notifying** workers, tenants, and other visitors where ACBM are located, and stressing the importance of avoiding disturbing the ACBM in any way.

C. The detailed description of **O&M Activities,** including:

   1. **Emergency procedures** for both major and minor episodes of fiber release;

   2. **Periodic surveillance** of ACM, so that any changes in the condition of ACM can be noted, assessed, and documented; and

   3. Detailed descriptions of **work procedures** for both general maintenance and Asbestos Associated Project Workers, which must be used so that workers can avoid or minimize fiber release when performing activities that may disturb ACM.

D. A list of **records** that must be kept to document O&M and abatement activities.

E. **Training requirements** for the DP, and custodial and maintenance staff.

In general, asbestos represents a health hazard **only** if fibers are breathed into the lungs or, in rare cases, are swallowed. Asbestos-containing materials that are non-friable (i.e. cannot be easily broken of crumbled by hand pressure) are not hazardous as long as they are intact and in good condition. Because friable materials can be easily crumbled or crushed, they are more susceptible to airborne fiber release than are non-friable materials.

It is a policy of the Nantucket Public School District that untrained employees and outside contractors **DO NOT** handle, touch or otherwise disturb any material that is asbestos or suspected of containing asbestos. A properly qualified and trained individual must handle any material that is, or may contain asbestos. Non-asbestos materials have been and may be identified by the asbestos coordinator using one or more of the following criteria: (1) lab analysis, (2) results of previous lab analysis, (3) product composition labels, (4) receipts, and so forth. At no time will any employee, student, or outside contractor assume a material to be asbestos-free. An inventory of ACBMs identified from the inspection are presented in Appendix A.

Section 7
Operations and Maintenance Program (Continued)

1. DUTIES OF THE ASBESTOS MANAGEMENT PLAN DESIGNATED PERSON

The DP oversees the implementation and management of the O&M plan. Duties of the DP include (1) notifying building staff, workers, and outside contractors where ACBM is located in the building, (2) assigning workers to tasks involving work that may disturb ACBM, (3) ensuring that abatement and O&M activities are conducted by trained qualified personnel, and (4) keeping records of all asbestos-related activities at the property.

The DP must receive training related to asbestos issues (see "Training Requirements" of this plan).

2. NOTIFICATION

The DP shall ensure that building workers, outside contractors, and tenants are notified of the location, quantity, and physical condition of identified and assumed ACBM that they might disturb. Such notification shall be accomplished by written notice, by personal communication, by posting signs at entrances to mechanical areas, and/or by labeling ACBM. By informing occupants of potential hazards in their vicinity, the notification reduces the possibility that occupants will accidentally disturb ACBM. The notification must stress that persons who disturb ACBM may accidentally release asbestos fibers into the air, and that therefore everyone must avoid disturbing ACBM. This notification will assure compliance with Occupational Health and Safety Administration (OSHA) Regulation 29 CFR Part 1926.1101, which regulates asbestos exposure as it relates to construction work (including building maintenance) and with 29 CFR 1910.1001, which regulates asbestos exposure in general industry (including normal housekeeping).

If asbestos-related construction, abatement, of O&M activities is conducted, the DP shall also notify the following persons about the presence, location, and quantity of ACBM:

A. Employees of the building, such as maintenance and custodial personnel who will work in or adjacent to areas containing ACBM:

B. Staff who will occupy areas containing ACBM.

C. Prospective employers applying for or bidding for work if their employees will be expected to work in or adjacent to areas containing ACBM.

D. Multiple employers occupying a work-site in the building, any of whose employees will be performing work within or adjacent to areas containing ACBM.

Section 7
Operations and Maintenance Program (Continued)

Before conducting any work in the building that has the potential to impact ACBM, contractors will be required to sign the Contractor's Asbestos Notification and Acknowledgment Form. In addition, all contractors and contractor's employees who work on the site will be required to notify the DP of the presence, location, and quantity of newly discovered ACBM within 24 hours (or sooner if ACBM is disturbed) of the discovery. If any building materials are discovered, the asbestos content of which is unknown, the material shall be presumed to contain asbestos, until the results of sampling and analysis prove otherwise. Appropriate sampling of the material shall be conducted by a Massachusetts Department of Labor and Work Force Development Division of Labor Standards accredited asbestos inspector and analyzed at an appropriately licensed asbestos analytical laboratory.

The DP shall ensure that all required warning signs are posted during abatement and O&M activities during which the release of asbestos fibers into the air is possible. Warning signs shall demarcate all regulated areas and shall bear the following information:

DANGER
ASBESTOS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE
CLOTHING ARE REQUIRED IN THIS AREA

Contractors and in-house personnel who remove ACBM within the site shall label all waste containers that contain ACBM waste in accordance with OSHA and EPA guidelines.

The Massachusetts Department of Environmental Protection (DEP) and the Massachusetts Division of Labor Standards (DLS) will be notified anytime work will impact any quantity of ACBM at the school.

The DP shall ensure that all previously installed ACBM that have been identified in the facility are labeled or identified by signs, as feasible. All ACBM that are friable and accessible, such as TSI located in mechanical areas or below suspended ceilings, will be labeled. Labels shall be attached to or posted in areas where employees, residents, and outside contractors who are likely to be exposed will clearly notice (such as at the entrance to mechanical rooms).

The labels shall bear the following information:

DANGER
CONTAINS ASBESTOS FIBERS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
DO NOT BREATHE DUST
AVOID CREATING DUST

Posted signs may be used in lieu of labels to indicate the type and location of each ACBM.

Section 7
Operations and Maintenance Program (Continued)

3. OPERATIONS AND MAINTENANCE ACTIVITIES

Operations and maintenance activities include:

A. Emergency procedures to be followed in the event of a major or minor episode of fiber release;
B. Periodic surveillance of ACBM within at the school building;
C. Work procedures associated with planned maintenance activities that may disturb ACBM. Only properly trained personnel under the control and direction of the DP shall conduct operations and maintenance activities.
D. Periodic Cleaning Activities

A. Emergency Procedures for Fiber Release Episodes

Fiber release episodes are categorized as *major* (the falling or dislodging of more than 3 square feet or 3 linear feet of friable ACBM), or minor (the falling or dislodging of fewer than 3 square feet or 3 linear feet of friable ACBM)

PROCEDURE FOR MAJOR EPISODE

1. Restrict entry into the area.

2. Immediately contact the DP

3. Post sign to prevent anyone from entering the area except persons necessary to perform the response action.

4. Shut off or temporarily modify the air-handling system to prevent the fibers from being distributed to other areas in the building.

5. The DP shall contact an accredited designer of abatement to prepare an abatement plan that specifies the appropriate response actions.

6. The DP shall ensure that only a Massachusetts Certified Asbestos Abatement Contractor conducts the response actions.

Section 7
Operations and Maintenance Program (Continued)

PROCEDURE FOR MINOR EPISODE

1. Thoroughly saturate the debris using all wetting methods necessary.

2. Clean the area using wet wiping techniques followed by vacuuming with a specially equipped High Efficiency Particulate Air (HEPA) vacuum.

3. Place all debris and all contaminated cleaning supplies (mop heads, rags, etc.) into a leak tight container, such as a 6-mil thick polyethylene waste bag, and seal the container. Place the sealed container into a second 6-mil thick polyethylene bag. If labeled waste bags are not used, apply warning label to outside of each bag used.

4. Repair the area of damaged ACBM, as follows:

    a. Use materials such as asbestos-free spackling, plaster, cement, or insulation; or

    b. Seal the area with latex paint or an encapsulate; or

    c. Immediately implement other appropriate response action.

B. Periodic Surveillance

Periodic surveillance of all known and assumed ACBM shall be conducted once every six months. The purpose of the regularly scheduled surveillance is to ensure that any ACBM that are damaged or that have deteriorated are detected in a timely manner. The DP shall use the information from the periodic surveillance in conjunction with ongoing reports from the periodic
surveillance in conjunction with ongoing reports from service workers of changes in the condition of the ACBM to take corrective action.

The periodic surveillance consists of a visual inspection of all known and assumed ACBM. Periodic surveillance shall also include a visual and physical evaluation of ACBM in order to determine the degree of damage and to assess the likelihood of future fiber release. The area in the immediate vicinity shall also be examined for potential loose ACBM debris. The DP shall record the cause of the damage.

Only persons who have received at least the minimum asbestos-awareness training (see “Training Requirements”, of this plan) shall conduct the periodic surveillance. The results of the surveillance shall be recorded on the periodic surveillance inspection form.

Section 7
Operations and Maintenance Program (Continued)

C. Work Procedures for General Maintenance Personnel

The following work practices shall be prohibited in all circumstances:

- Drilling holes in ACBM;
- Damaging ACBM while moving furniture or other objects;
- Sweeping of dusting floors, ceilings, moldings, or other surfaces in asbestos-contaminated environments;
- Using an ordinary vacuum to clean up asbestos-containing or asbestos contaminated debris (only vacuums equipped with a HEPA filter should be used);
- Removing potentially contaminated ventilation system filters without thoroughly wetting them; and
- Shaking potentially contaminated ventilation system filters.

D. Periodic Cleaning

The following is a general outline to be utilized for the properly trained personnel to conduct the periodic cleaning activities:

- Utilization of disposable rags to wet wipe of all non-porous horizontal surfaces followed by the use of a HEPA-equipped vacuum. Dry sweeping and/or dusting is not permitted to be used to clean the surfaces.
- The collected debris within the lined HEPA-equipped vacuum and disposal rags should be properly disposed of in a labeled asbestos-waste bag accompanied by a Waste Shipment Record for future disposal at a permitted facility that accepts asbestos waste.
- Document the Name of the individual conducting the work activities, location date and time of cleaning for proper recordkeeping. These records should be included within the AMP for the school.

Section 7
Operations and Maintenance Program (Continued)

4. RECORDKEEPING REQUIREMENTS

The building owner shall maintain the following documentation pertaining to ACBM in the facility:

- All data that are relied upon to demonstrate that suspect ACBM do not in fact contain
  asbestos.
- All data communicated and received that identify the locations and quantities of ACBM.
- All records associated with abatement projects and O&M activities.These documents shall be maintained during the term of ownership. They shall then be transferred to successive owners, in accordance with OSHA Regulation 1926.1101 (n).
- If the owner's employees conduct activities that may potentially cause them to be exposed to asbestos fibers, the owner shall keep the following additional records:
- All employee exposure-monitoring records pursuant to OSHA Regulation 1926.1101(f).
- All information relative to medical surveillance of employees pursuant to OSHA Regulation 1926.1101(m). Medical surveillance shall be required only if:

  1. Employees are required to conduct tasks that would result in their exposure to airborne concentrations of asbestos above the OSHA permissible exposure limit (PEL); or
  2. If employees conduct asbestos abatement tasks for more than 30 days per year.

- The owner shall maintain all employee-training records for one year beyond the employee's last date of employee's last date of employment.

5. TRAINING REQUIREMENTS

The extent of asbestos training for facility employees depends on the type of asbestos-related activities they will conduct. For most employees who will require training, a two-hour awareness course will be sufficient but necessary. For employees who are involved in activities where exposure to airborne asbestos fibers is likely, a more comprehensive 16-hour training course is necessary.

Section 7
Operations and Maintenance Program (Continued)

AWARENESS TRAINING

The curriculum shall include instruction in the following:

- The location, quantity, and physical condition of all ACBM located in the facility.
- Recognition of damage, deterioration, and delaminating of ACBM.
- The health effects associated with asbestos exposure, including the relationship between smoking and asbestos in producing lung cancer.
- Procedures to be implemented in the event of a minor or major episode of fiber release.
- The requirements for posting signs and affixing labels, and the meaning of the required legends for such signs and labels.

COMPREHENSIVE WORKER TRAINING

The curriculum shall include instruction in the following:

- All awareness training information described above.
- The nature of operations that could result in exposure to asbestos, and the importance
  of necessary protective controls and of procedures for minimizing exposure, including:
  - engineering controls
  - work practices,
  - respirators,
  - housekeeping procedures,
  - hygiene facilities,
  - protective clothing,
  - decontamination procedures,
  - emergency procedures,
  - waste disposal procedures and any necessary instruction in the use of these controls and procedures.

Section 7

Operations and Maintenance Program (Continued)

- The purpose, proper use, fitting instructions, and limitations of respirators.
- Medical surveillance program requirements
- The contents of the OSHA standard (1926.1101) regarding asbestos in construction.
- Hands-on-training in the use of respiratory protection, other personal protection measures, and work practices.

Detailed procedures for conducting small-scale, short duration abatement activities, as defined in Appendix A to Subpart E to EPA Regulation 40 CFR Part 763.

APPENDIX A

LOCATIONS OF THE ASBESTOS CONTAINING BUILDING MATERIALS AND UPDATED CONDITONS

Appendix A
AHERA Inspection June 2023
Locations of the Identified Asbestos-Containing Materials
Nantucket High School-10 Surfside Road

Location	ACM Description	Estimated Quantity	VERTEX 2020 Cond.	VERTEX 2023 Cond.	HA #
	Lower Level				
Room 008	Black Floor Tile Mastic (Under 12" Gray Spec Floor Tile)	540 ft^2	C	C	5
Room 010	Black Floor Tile Mastic (Under 12" Gray Spec Floor Tile)	1300 ft^2	C	C	5
	First Floor				
Cafeteria	Black Floor Tile Mastic (Under 12" Gray Spec Floor Tile)	2200 ft^2	C	C	5
Gym	Wood Flooring Materials	10000 ft^2	C	C	5

Notes:

ft^2 = Square Foot	Cond. = Condition	NA = Not Accessible
lf = Linear Foot	G = Good	C = Covered
Unit = Each	MD = Minor Damage	M = Miscellaneous
Y= Yes	D = Damaged	S= Surfacing
N = No	Fri. = Friable	

HA # = Homogenous Area Hazard Assessment Category

1 = Damaged/Significantly Damaged Thermal System Insulation
2 = Damaged Friable Surfacing ACBM
3 = Significantly Damaged Friable Surfacing ACBM
4 = Damaged or Significantly Damaged Friable Miscellaneous ACBM
5 = ACBM with Potential for Damage
6 = ACBM with Potential for Significant Damage
7 = Any Remaining Friable ACBM or Friable Suspected ACBM
NA = Not Applicable

APPENDIX B

ESTIMATED RESOURCES REQUIRED TO COMPLETE THE RESPONSE ACTIONS

Appendix B
AHERA Inspection June 2023
Estimated Resources to Complete Response Actions
Nantucket High School-10 Surfside Road

Location	ACM Description	Estimated Quantity	Recommended Response Action	Estimated Cost	Date of Completed Response Action
No Recommended Response Actions					

Notes:

*The estimated cost provided above does not include costs that may be associated with two-hour asbestos awareness training, OSHA 16-hr Operations and Maintenance Training, and/or the labor to conduct the required six-month surveillance re-inspections. Please refer below for estimated costs that may be associated with the mentioned above:

2-Hour Asbestos Awareness Training = $75/person
OSHA 16-hr Operations and Maintenance Training = $300/person
Six-Month Periodic Surveillance Inspection = $400/inspection

APPENDIX C

ESTIMATED RESOURCES REQUIRED FOR THE ABATEMENT OF THE IDENTIFIED ACBMs

Appendix C
AHERA Inspection June 2023
Estimated Costs for the Removal of the Identified Asbestos-Containing Materials
Nantucket High School-10 Surfside Road

Location	ACM Description	Estimated Quantity	Estimated Costs
Lower Level			
Room 008	Black Floor Tile Mastic (Under 12" Gray Spec Floor Tile)	540 ft^2	$4,860.00
Room 010	Black Floor Tile Mastic (Under 12" Gray Spec Floor Tile)	1300 ft^2	$11,700.00
First Floor			
Cafeteria	Black Floor Tile Mastic (Under 12" Gray Spec Floor Tile)	2200 ft^2	$19,800.00
Gym	Wood Flooring Materials	10000 ft^2	$60,000.00

Notes:

ft^2 = Square Foot

* The estimated costs provided above are developed from current Abatement Contractor Unit pricing. These estimates will vary according to competitive bidding, accessibility, location, and condition of ACMs, phasing of work, etc. In addition, the costs above do not include mobilization of the Abatement Contractor, Abatement Work Plan/Design, Project Monitoring and/or Clearance Testing Services for the completion of the response actions. Please refer for below unit pricing regarding costs for the Contractor Mobilization and Clearance Testing Services:

Abatement Work Plan/Design Specification = $500-$2,500.00
Abatement Contactor Mobilization = $1,500.00-$2,500.00
Project Monitoring/Clearance Testing = $520.00-$600.00/per shift
Transmission Electron Microcopy (TEM) Analysis = $75.00-$100.00/sample
Phase Contrast Microscopy (PCM) Analysis = No Charge -$15.00/sample
Clearance Report Preparation = $350.00-$800.00

APPENDIX D

PERSONNEL CERTIFICATIONS

The Vertex Companies, LLC
ACCREDITATION PAGE

Accredited Inspector

Name: Jason Mohre

Accreditation Number: AI000262

Signature: _____

Date: 7/20/23

Accredited Management Planner

Name: Jason Mohre

Accreditation Number: AP000080

Signature:_____

Date: 7/20/23

APPENDIX E

DESIGNATED PERSON ASSURANCES SIGN-OFF

DESIGNATED PERSON ASSURANCES

In accordance with 40 CFR ' 763.93(i) of the Environmental Protection Agency Asbestos-Containing Material in Schools regulation, the undersigned Local Education Agency (LEA) Designated Person (DP) hereby certifies that the following general responsibilities of the LEA under 40 CFR ' 763.84 have been or will be met:

1.Ensure that the activities of any persons who perform inspections, reinspections, and periodic surveillance, develop and update management plans, and develop and implement response actions, including operations and maintenance, are carried out in accordance with Part 763, Subpart E.

2. Ensure that all custodial and maintenance employees are properly trained as required by Part 763, Subpart E and other applicable Federal and/or State regulations (e.g., the Occupational Safety and Health Administration asbestos standard for construction, the EPA worker protection rule, or applicable State regulations).

3. Ensure that workers and building occupants, or their legal guardians, are 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.

4. Ensure that short-term workers (e.g., telephone repair workers, utility workers, or exterminators) who may come in contact with asbestos in a school are provided information regarding the locations for Asbestos-Containing Building Materials (ACBM) and suspected ACBM assumed to be Asbestos-Containing Materials (ACM).

5. Ensure that warning labels are posted in accordance with ' 40 CFR 763.95.

6. Ensure that management plans are available for inspection and notification of such availability has been provided as specified in the management plan under ' 40 CFR 763.93(g).

7. Designate a person to ensure that requirements under ' 763.84 are properly implemented and ensure that the designated person receives adequate training to perform duties assigned under ' 763.84. Such training shall provide, as necessary, basic knowledge of: health effects of asbestos; detection, identification, and assessment of ACM; options for controlling ACBM; asbestos management programs; relevant Federal and State regulations concerning asbestos, including those in Part 763, Subpart E and those of the Occupational Safety and Health Administration, U.S. Department of Transportation and the U.S. Environmental Protection Agency.

8. Consider whether any conflict of interest may arise from the inter-relationship among accredited personnel and whether that should influence the selection of accredited personnel to perform activities under Part 763, Subpart E.

Name of Designated Person:

Designated Person's Signature: **Date:**

APPENDIX F

SIX-MONTH SURVEILLANCE

AHERA Six-Month Surveillance Inspection Date:_____

(Print Name):_____

Signature:_____

Nantucket High School-10 Surfside Road

Location	ACM Description	Estimated Quantity	July 2023 Cond.	Jan. 2024 Cond.	July 2024 Cond.	Jan. 2025 Cond.	July 2025 Cond.	Jan. 2026 Cond.
Lower Level								
Room 008	Black Floor Tile Mastic (Under 12" Gray Spec Floor Tile)	540 ft^2	C					
Room 010	Black Floor Tile Mastic (Under 12" Gray Spec Floor Tile)	1300 ft^2	C					
First Floor								
Cafeteria	Black Floor Tile Mastic (Under 12" Gray Spec Floor Tile)	2200 ft^2	C					
Gym	Wood Flooring Materials	10000 ft^2	C					

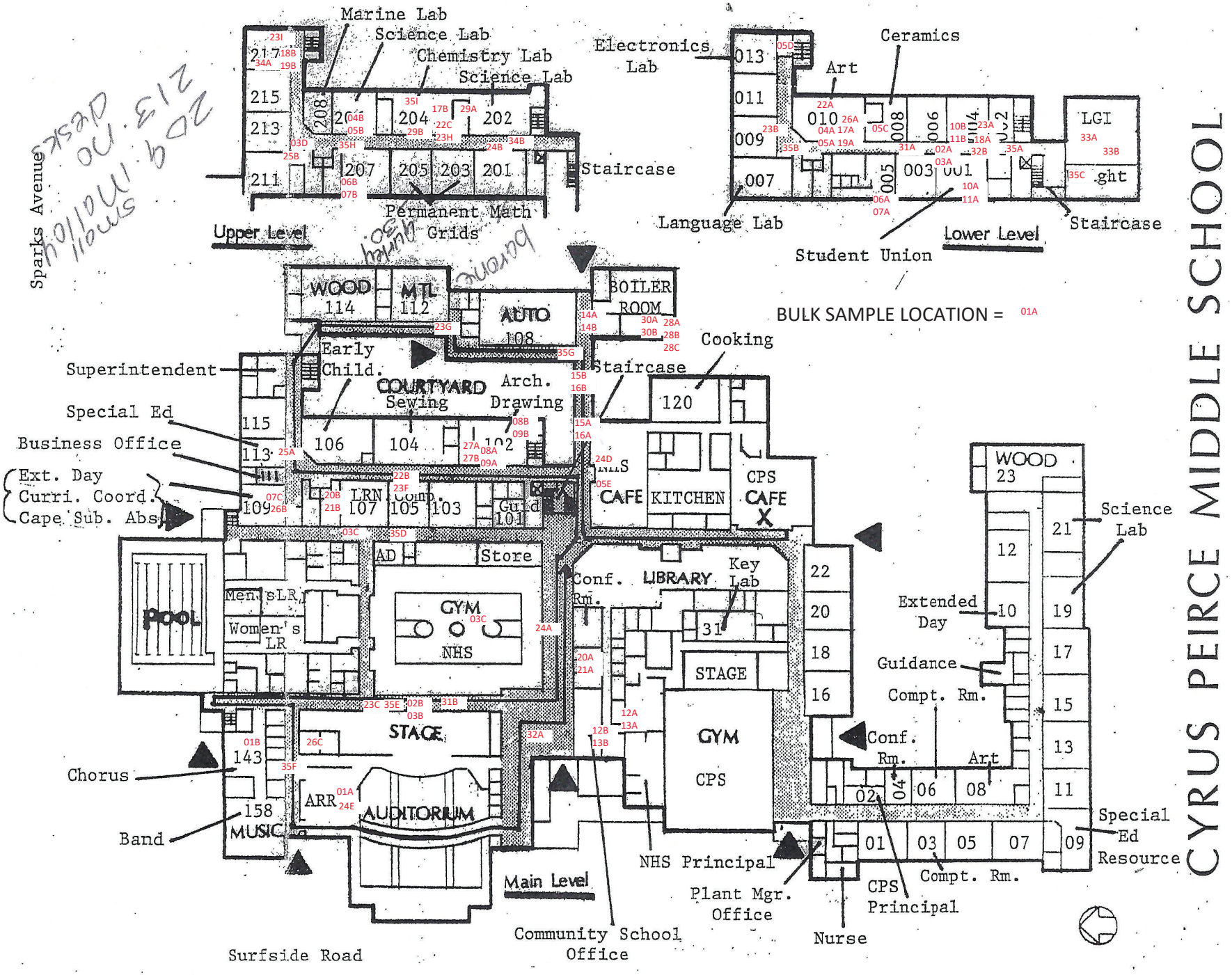
Notes:

ft^2 = Square Foot Cond. = Condition
C = Covered G = Good
D = Damaged MD = Minor Damage

APPENDIX G

SCHEMATICS

NANTUCKET HIGH SCHOOL



CYRUS PEIRCE MIDDLE SCHOOL