

# INITIAL AHERA ASBESTOS SURVEY



MASON'S COVE ELEMENTARY

3370 BRADSHAW LANE  
SALEM, VIRGINIA 24153

ECS PROJECT NO. 47:3555

FOR

ROANOKE COUNTY SCHOOLS

NOVEMBER 17, 2017





November 17, 2017

Mr. George Assaid  
Roanoke County Schools  
5937 Cove Road  
Roanoke, Virginia 24019

ECS Project No. 47:3555

Reference: Initial AHERA Asbestos Survey, Mason's Cove Elementary, 3370 Bradshaw Lane, Salem, Virginia

Dear Mr. Assaid:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide Roanoke County Schools with the results of the above referenced Initial AHERA Asbestos Survey performed at Mason's Cove Elementary located at 3370 Bradshaw Lane in Salem, Virginia. This report summarizes our observations, analytical results, findings, and recommendations related to the work performed. The work described in this report was performed by ECS in general accordance with the Scope of Services described in Roanoke County Public Schools AHERA-RFP Number SB2017-002 and the terms and conditions of the agreement authorizing those services.

ECS appreciates this opportunity to provide Roanoke County Schools with our services. If we can be of further assistance to you, please do not hesitate to contact us.

Sincerely,

ECS Mid-Atlantic, LLC

A handwritten signature in black ink that reads "Robert Curran". The signature is written in a cursive style with a large, prominent 'R'.

Robert Curran  
Environmental Scientist  
rcurran@ecslimited.com  
804-353-6333

A handwritten signature in black ink that reads "Chris Chapman". The signature is written in a cursive style with a large, prominent 'C'.

Christopher J. Chapman, CIH  
Director of Industrial Hygiene  
cchapman@ecslimited.com  
804-353-6333

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## EXECUTIVE SUMMARY

The subject building consists of the Mason's Cove Elementary School located at 3370 Bradshaw Road Salem, Virginia. The building consists of two floor levels and was reportedly constructed in 2011. The facility consists of various classrooms, offices, storage rooms, cafeteria, bathrooms, and a media center.

Per the United States Environmental Protection Agency (US EPA) requirements, the purpose of the survey was to evaluate the building materials within the school areas occupied by ACPS for asbestos-containing materials (ACMs). The non-invasive survey was performed in general per EPA Standard 40 CFR 763 Subpart E, Asbestos Hazard Emergency Response Act (AHERA) and OSHA Standard 29 CFR 1926.1101 Inspection Protocol.

The survey was performed for the readily accessible interior areas of the facility. Exterior and roofing materials were not included in this assessment as these areas are excluded under AHERA. During the survey, ECS attempted to locate suspect asbestos-containing building materials (ACBMs) in readily accessible areas. However, due to the destructive means required to access some materials, certain areas were deemed inaccessible (i.e. behind solid walls or sub-grade materials) and were not surveyed for suspect ACBMs. Unidentified suspect ACMs may be located in these and/or other inaccessible areas.

During our assessment, a total of 46 bulk samples were collected and a total of 64 layers were analyzed by the laboratory. Based on the laboratory analysis of the suspect bulk samples collected during the survey, none of the materials sampled were reported to contain asbestos. Please refer to Table 1 for a list of the suspect asbestos bulk samples collected during our survey. Our findings and recommendations for are discussed further in this report provided further in the report.

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## 1.0 SITE DESCRIPTION

The subject building consists of the Mason's Cove Elementary School located at 3370 Bradshaw Road Salem, Virginia. The building consists of two floor levels and was reportedly constructed in 2011. The facility consists of various classrooms, offices, storage rooms, cafeteria, bathrooms, gym, and a media center.

## 2.0 PURPOSE

The Asbestos Hazard Emergency Response Act (AHERA) requires public school districts to inspect their schools for asbestos-containing building materials and prepare management plans for identified asbestos containing materials and to take action to prevent or reduce asbestos hazards. This is based on an "in-place" management of asbestos-containing materials. Personnel working on asbestos activities in schools must be trained and accredited in accordance with US EPA Asbestos Model Accreditation Plan requirements. Prior to renovation or demolition of asbestos containing materials facility owners must also comply with the US EPA Asbestos National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations.

The purpose of the Asbestos Containing Materials (AHERA) Survey was to identify asbestos-containing materials (ACMs) which may require special handling and/or disposal if removed disturbed during normal routine maintenance activities performed on the building.

## 3.0 METHODOLOGY

ECS performed the authorized Scope of Services in general accordance with our proposal, standard industry practice(s) and methods specified by regulation(s) for the identification of Asbestos-Containing Materials (ACMs). The following represents a summary of our onsite work performed on August 17, 2017.

### 3.1 Asbestos-Containing Materials

The non-invasive asbestos survey was performed by asbestos inspectors (License No. 3303003809) who have received EPA accredited training and are licensed by the Commonwealth of Virginia. Samples were collected in general accordance with EPA Standard 40 CFR 763 Subpart E, Asbestos Hazard Emergency Response Act (AHERA) and OSHA Standard 29 CFR 1926.1101 Inspection Protocol. Multiple samples of each unique material were submitted. Samples were analyzed using "Positive Stop" methodology. If one sample of a homogeneous material is reported to contain asbestos, the remaining samples of that material are not analyzed. EPA regulations stipulate that if one sample contains asbestos the entire quantity of that material contains asbestos, regardless of additional analysis.

Samples of suspect ACMs were collected utilizing hand tools and placed into individual, labeled plastic bags. Unique bulk suspect ACM samples were submitted to Environmental Hazards Services, LLC (EHS), Inc. in Richmond, Virginia for analysis via Polarized Light Microscopy (PLM) in accordance with current EPA-600 methodology. Materials consisting of additional layers were analyzed separately. EHS is listed as an accredited laboratory by the National Voluntary Laboratory Accreditation Plan



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(NVLAP) managed by the National Institute of Standards and Technology (NIST) for bulk sample analysis by currently approved EPA methodology by PLM.

During the survey, ECS attempted to identify suspect ACMs in readily accessible areas. However, due to the destructive means required to identify some materials, certain areas were deemed inaccessible (i.e. behind walls or sub grade materials) and were not surveyed for suspect ACMs. Unidentified suspect ACMs may be located in these and/or other inaccessible areas. In total, 46 bulk representative samples were submitted to the laboratory of which 64 layers were analyzed.

## 4.0 RESULTS

The following is a summary of laboratory results, findings and observations.

### 4.1 Asbestos-Containing Materials

Asbestos-Containing Material (ACMs) are defined as any material containing more than one percent (>1%) asbestos as determined using the method specified in Appendix A, Subpart F, 40 CFR Part 763, Section 1, PLM.

None of the materials submitted for analysis to EHS were reported to contain asbestos. Please refer to Table 1 attached to this report for a list of the suspect asbestos bulk samples collected during our survey.

### 4.2 Suspect or Assumed Asbestos-Containing Materials

Due to the inaccessibility or the destructive means that asbestos sampling requires, additional suspect ACMs may remain within the building hidden behind inaccessible areas that include, but are not limited to, sub-grade walls, structural members, topping slabs, sub-grade sealants, flooring located below underlayments, areas behind exterior walls, pipe trenches, and subsurface utilities, etc.. These areas/materials were deemed inaccessible and were not assessed during this survey.

If these materials are discovered during construction activities, they should be presumed to contain asbestos and be treated as asbestos-containing materials (ACMs) or, otherwise, sampled immediately upon discovery and prior to disturbance for asbestos content by a certified asbestos inspector in accordance with 29 CFR 1926.1101.

Materials which are commonly suspected to contain asbestos located in inaccessible areas of similarly constructed buildings include:

- Ceramic Wall/Floor Tile Mastics/Compounds;
- Fire Door and associated Casing Insulation in locations requiring a rated fire door and door casing;
- Mirror Mastics behind/under mirrors;
- Roof Structures – roof systems;
- Waterproofing Membrane/Mastics/vapor barriers within exterior wall cavities, behind Interior finishes, exterior veneer and/or subgrade walls



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## 5.0 RECOMMENDATIONS AND REGULATORY REQUIREMENTS

Based on our understanding of the purpose of the Initial AHERA Asbestos Survey, the results of laboratory analysis, and our findings and observations, ECS presents the following recommendations.

### 5.1 Asbestos-Containing Materials

None of the bulk samples submitted to EHS were reported to contain detectable concentrations of asbestos. If additional suspect asbestos-containing materials are uncovered during future renovation activities which were not accessible during this sampling event, it is recommended that these materials be sampled or tested immediately upon discovery for asbestos content by a certified asbestos inspector in accordance with 29 CFR 1926.1101.

Suspect ACMs may be present in inaccessible areas and portions of the building which were not assessed due to occupancy or locked areas. Prior to any renovation efforts which will involve any of those areas or the demolition of the building, a follow-up survey should be performed to include destructive means to access these areas as necessary. ECS recommends that this report be filed as part of the school facilities AHERA documentation.

## 6.0 LIMITATIONS

The conclusions and recommendations presented within this report are based upon a reasonable level of assessment within normal bounds and standards of professional practice for a site in this particular geographic setting. ECS is not responsible or liable for the discovery and elimination of hazards that may potentially cause damage, accidents, or injuries.

The observations, conclusions, and recommendations pertaining to environmental conditions at the subject site are necessarily limited to conditions observed, and/or materials reviewed at the time this study was undertaken. No warranty, expressed or implied, is made with regard to the conclusions and recommendations presented within this report. This report is provided for the exclusive use of the client. This report is not intended to be used or relied upon in connection with other projects or by other unidentified third parties without the written consent of ECS and the client.

During this study, samples were submitted for analysis at an accredited laboratory via polarized light microscopy. As with any similar survey of this nature, actual conditions exist only at the precise locations from which samples were collected. Certain inferences are based on the results of this sampling and related testing to form a professional opinion of conditions in areas beyond those from which the samples were collected. No other warranty, expressed or implied, is made.

Our recommendations are in part based on federal, state, and local regulations and guidelines. ECS does not assume the responsibility of the person(s) in charge of the site, or otherwise undertake responsibility for reporting to any local, state, or federal public agencies, any conditions at the site that may present a potential danger to public health, safety, or the environment. Under this scope of services, ECS assumes no responsibility regarding any response actions initiated as a result of these findings. General compliance with regulations and response actions are the sole responsibility of the Client and should be conducted in accordance with local, state, and/or federal requirements.





# **Appendix I: Asbestos Bulk Sample Results**

**TABLE 1**  
**BULK SAMPLING OF SUSPECT ASBESTOS-CONTAINING MATERIALS**

<u>Sample #</u>	<u>Sampling Location</u>	<u>Material/Description</u>	<u>Analytical Results</u>
1-1	CAFETERIA STORAGE	White CMU Wall Coating	NAD
1-2	OFFICE 106	White CMU Wall Coating	NAD
1-3	GYM	White CMU Wall Coating	NAD
1-4	HALL @ EAST STAIRCASE	White CMU Wall Coating	NAD
1-5	HALL @ WEST STAIRCASE	White CMU Wall Coating	NAD
1-6	ROOM 208	White CMU Wall Coating	NAD
1-7	ROOM 203 COMPUTER LAB	White CMU Wall Coating	NAD
2-1	HALL @ GUIDANCE OFFICE	Concrete Floor Seam Caulk	NAD
2-2	HALL WEST END OF 1ST FLOOR	Concrete Floor Seam Caulk	NAD
3-1A	ROOM 115 STORAGE	Grey 4" Vinyl Cove Baseboard	NAD
3-1B	ROOM 115 STORAGE	Yellow Mastic Associated with Grey VCB	NAD
3-2A	ROOM 126	Grey 4" Vinyl Cove Baseboard	NAD
3-2B	ROOM 126	Yellow Mastic Associated with Grey VCB	NAD
3-3A	ROOM 212	Grey 4" Vinyl Cove Baseboard	NAD
3-3B	Room 212	Yellow Mastic Associated with Grey VCB	NAD
4-1	MECHANICAL ROOM	White Fiberglass Pipe Insulation Mastic	NAD
4-2	MECHANICAL ROOM	White Fiberglass Pipe Insulation Mastic	NAD
5-1A	STAGE	Black 90° Vinyl Cove Baseboard	NAD
5-1B	STAGE	Yellow Mastic Associated with Cove Baseboard	NAD
5-2A	GYM	Black 90° Vinyl Cove Baseboard	NAD

Table Notes:

NAD = No Asbestos Detected

N/A = Sample Not Analyzed; Positive Stop

**Bold** - Asbestos Containing Materials

<u>Sample #</u>	<u>Sampling Location</u>	<u>Material/Description</u>	<u>Analytical Results</u>
5-2B	GYM	Yellow Mastic Associated with Cove Baseboard	NAD
6-1	COMPUTER LAB ROOM 109	Interior Door Caulk	NAD
6-2	ROOM 201	Interior Door Caulk	NAD
7-1	WATER TOWER BUILDING	Grey Duct Mastic	NAD
7-2	WATER TOWER BUILDING	Grey Duct Mastic	NAD
8-1	MUSIC ROOM 114	Pinhole/Divot Ceiling Tile	NAD
8-2	HALL @ OFFICE WORKROOM	Pinhole/Divot Ceiling Tile	NAD
8-3	HALL @ ROOM 208	Pinhole/Divot Ceiling Tile	NAD
9-1A	HALL @ OFFICE WORKROOM	Drywall Wall	NAD
9-1B	HALL @ OFFICE WORKROOM	Drywall Joint Compound	NAD
9-2A	HALL @ WEST STAIRCASE	Drywall Wall	NAD
9-2B	HALL @ WEST STAIRCASE	Drywall Joint Compound	NAD
10-1	KITCHEN	Smooth Ceiling Tile	NAD
10-2	KITCHEN	Smooth Ceiling Tile	NAD
11-1	MAIN OFFICE	Leaf Pattern Ceiling Tile	NAD
11-2	HALL @ EXIT 5	Leaf Pattern Ceiling Tile	NAD
12-1	HALL @ ROOM 205	Red Fire Stop	NAD
12-2	HALL @ ROOM 208	Red Fire Stop	NAD
13-1A	EAST END 2ND FLOOR HALL	Grey Aggregate 12"x12" Floor Tile	NAD
13-1B	EAST END 2ND FLOOR HALL	Yellow Mastic Associated with Floor Tile	NAD
13-2A	HALL @ ROOM 214	Grey Aggregate 12"x12" Floor Tile	NAD
13-2B	HALL @ ROOM 214	Yellow Mastic Associated with Floor Tile	NAD

Table Notes:

NAD = No Asbestos Detected

N/A = Sample Not Analyzed; Positive Stop

**Bold** - Asbestos Containing Materials

<u>Sample #</u>	<u>Sampling Location</u>	<u>Material/Description</u>	<u>Analytical Results</u>
14-1A	HALL @ ROOM 213	Tan Pebble 12"x12" Floor Tile	NAD

Table Notes:

NAD = No Asbestos Detected

N/A = Sample Not Analyzed; Positive Stop

**Bold** - Asbestos Containing Materials

# **Appendix II: Site Photographs**



1 - View of typical CMU wall coating, homogenous group 1



2 - View of typical concrete floor seam caulk, homogeneous group 2



3 - View of typical 4" vinyl cove baseboard, homogeneous group 3



4 - View of typical white mastic on fiberglass pipe insulation, homogeneous group 4

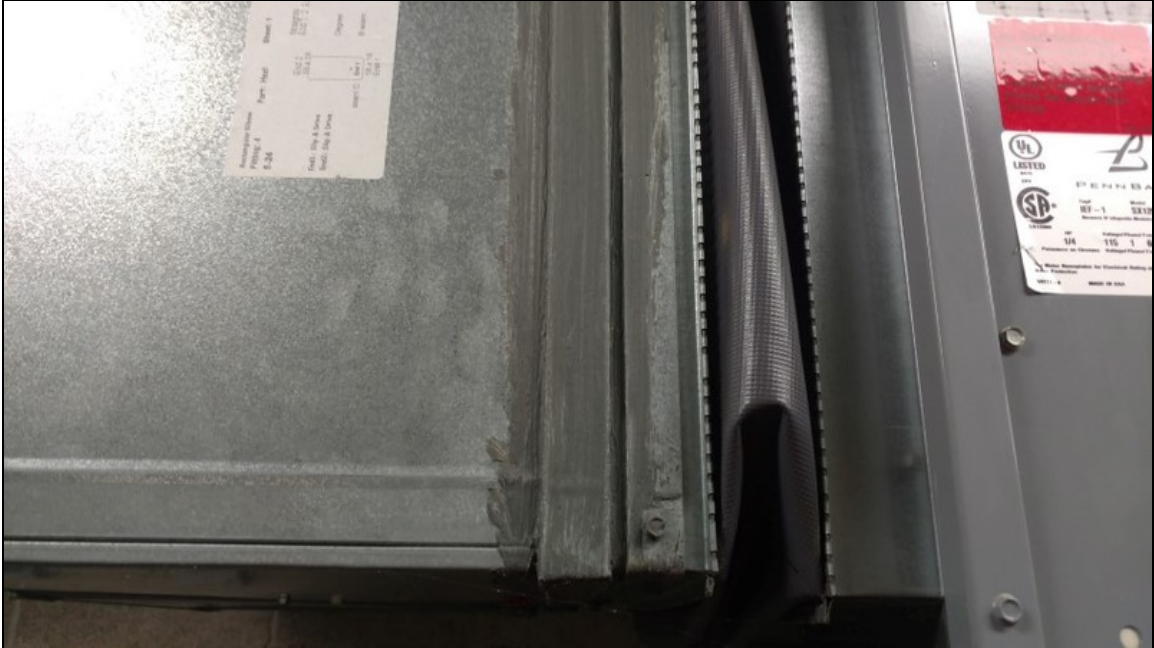


5 - View of typical black 90 degree vinyl cove baseboard, homogeneous group 5



6 - View of typical interior metal door frame caulk, homogeneous group 6





7 - View of typical grey HVAC duct mastic, homogeneous group 7



8 - View of typical pinhole/divot ceiling tile, homogeneous group 8



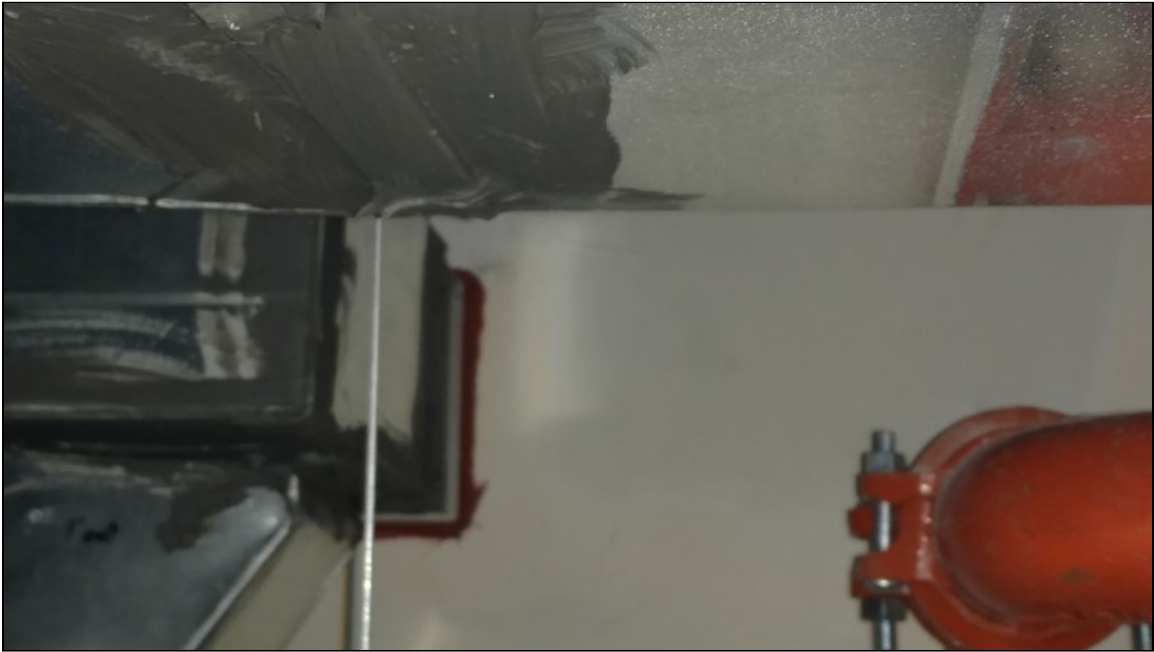
9 - View of typical drywall and joint compound wall, homogeneous group 9



10 - View of typical smooth ceiling tile, homogeneous group 10



11 - View of typical leaf pattern ceiling tile, homogeneous group 11



12 - Typical view of red fire stop caulk, homogeneous group 13



13 - View of typical grey aggregate 12"x12" floor tile, homogeneous group 13



14 - View of typical tan pebble style floor tile, homogeneous group 14



15 - View of typical green aggregate 12"x12" floor tile, homogeneous group 15



16 - View of typical red aggregate 12"x12" floor tile, homogeneous group 16



17 - View of typical grey HVAC duct mastic inside the school, homogeneous group 17



18 - View of typical grey mottled 12"x12" floor tile, homogeneous group 18



19 - View of typical drywall and joint compound ceiling, homogeneous group 19

# **Appendix III: Laboratory Report(s)**





# Asbestos Bulk Analysis Report

Environmental Hazards Services, L.L.C.  
7469 Whitepine Rd  
Richmond, VA 23237  
Telephone: 800.347.4010

**Report Number:** 17-08-02797

**Client:** ECS Mid-Atlantic - Roanoke  
7670 Enon Drive  
Suite 101  
Roanoke, VA 24019

**Received Date:** 08/21/2017  
**Analyzed Date:** 08/21/2017, 08/22/2017  
**Reported Date:** 08/24/2017

**Project/Test Address:** RCPS - Masons Cove Elementary; Roanoke, VA

**Client Number:**  
200608

**Fax Number:**

## Laboratory Results

Lab Sample Number <i>Client Sample Number</i>	Layer Type	Lab Gross Description <i>Client Sample Description</i>	Asbestos	Other Materials
17-08-02797-001  1-1		Off-White/Pale Beige Brittle to Coarse Powder; Inhomogeneous  <i>White CMU Wall Coating</i>	NAD	1% Cellulose 99% Non-Fibrous
17-08-02797-002  1-2		Off-White/Pale Beige Brittle to Coarse Powder; Inhomogeneous  <i>White CMU Wall Coating</i>	NAD	100% Non-Fibrous
17-08-02797-003  1-3		Off-White/Pale Beige Brittle to Coarse Powder; Inhomogeneous  <i>White CMU Wall Coating</i>	NAD	1% Cellulose 99% Non-Fibrous
17-08-02797-004  1-4		Off-White/Pale Beige Brittle to Coarse Powder; Inhomogeneous  <i>White CMU Wall Coating</i>	NAD	100% Non-Fibrous
17-08-02797-005  1-5		Off-White/Pale Beige Brittle to Coarse Powder; Inhomogeneous  <i>White CMU Wall Coating</i>	NAD	100% Non-Fibrous

# Environmental Hazards Services, L.L.C

**Client Number:** 200608  
**Project/Test Address:** RCPS - Masons Cove Elementary;  
 Roanoke, VA

**Report Number:** 17-08-02797

Lab Sample Number <i>Client Sample Number</i>	Layer Type	Lab Gross Description <i>Client Sample Description</i>	Asbestos	Other Materials
17-08-02797-006  1-6		Off-White/Pale Beige Brittle to Coarse Powder; Inhomogeneous  <i>White CMU Wall Coating</i>	NAD	1% Cellulose 99% Non-Fibrous
17-08-02797-007  1-7		Off-White/Pale Beige Brittle to Coarse Powder; Inhomogeneous  <i>White CMU Wall Coating</i>	NAD	100% Non-Fibrous
17-08-02797-008  2-1		Tan-Gray Pliable; Homogeneous  <i>Concrete Floor Seam Caulk</i>	NAD	100% Non-Fibrous
17-08-02797-009  2-2		Tan-Gray Pliable; Homogeneous  <i>Concrete Floor Seam Caulk</i>	NAD	100% Non-Fibrous
17-08-02797-010A  3-1	Cove Base	Gray Vinyl-Like; Homogeneous  <i>Grey 4" Vinyl Cove Baseboard</i>	NAD	100% Non-Fibrous
17-08-02797-010B  3-1	Mastic	Pale Yellow Adhesive; Homogeneous  <i>Grey 4" Vinyl Cove Baseboard</i>	NAD	2% Cellulose 98% Non-Fibrous
17-08-02797-011A  3-2	Cove Base	Gray Vinyl-Like; Homogeneous  <i>Grey 4" Vinyl Cove Baseboard</i>	NAD	100% Non-Fibrous
17-08-02797-011B  3-2	Mastic	Pale Yellow Adhesive; Homogeneous  <i>Grey 4" Vinyl Cove Baseboard</i>	NAD	3% Cellulose 97% Non-Fibrous

## Environmental Hazards Services, L.L.C

**Client Number:** 200608  
**Project/Test Address:** RCPS - Masons Cove Elementary;  
 Roanoke, VA

**Report Number:** 17-08-02797

Lab Sample Number <i>Client Sample Number</i>	Layer Type	Lab Gross Description <i>Client Sample Description</i>	Asbestos	Other Materials
17-08-02797-012A 3-3	Cove Base	Gray Vinyl-Like; Homogeneous <i>Grey 4" Vinyl Cove Baseboard</i>	NAD	100% Non-Fibrous
17-08-02797-012B 3-3	Mastic	Pale Yellow Adhesive; Homogeneous <i>Grey 4" Vinyl Cove Baseboard</i>	NAD	2% Cellulose 98% Non-Fibrous
17-08-02797-013 4-1		White Pliable to Brittle; Homogeneous <i>White Fiberglass Insulation Mastic</i>	NAD	8% Fibrous Glass 7% Synthetic 85% Non-Fibrous
17-08-02797-014 4-2		White Pliable to Brittle; Homogeneous <i>White Fiberglass Insulation Mastic</i>	NAD	1% Cellulose 7% Fibrous Glass 7% Synthetic 85% Non-Fibrous
17-08-02797-015A 5-1	Cove Base	Black Vinyl-Like; Homogeneous <i>Black 90° Vinyl Cove Baseboard</i>	NAD	100% Non-Fibrous
17-08-02797-015B 5-1	Mastic	Pale Yellow Adhesive; Homogeneous <i>Black 90° Vinyl Cove Baseboard</i>	NAD	3% Cellulose 1% Fibrous Glass 96% Non-Fibrous
17-08-02797-016A 5-2	Cove Base	Black Vinyl-Like; Homogeneous <i>Black 90° Vinyl Cove Baseboard</i>	NAD	100% Non-Fibrous

# Environmental Hazards Services, L.L.C

**Client Number:** 200608  
**Project/Test Address:** RCPS - Masons Cove Elementary;  
 Roanoke, VA

**Report Number:** 17-08-02797

Lab Sample Number <i>Client Sample Number</i>	Layer Type	Lab Gross Description <i>Client Sample Description</i>	Asbestos	Other Materials
17-08-02797-016B  5-2	Mastic	Pale Beige Adhesive; Homogeneous  <i>Black 90° Vinyl Cove Baseboard</i>	NAD	1% Cellulose 1% Wollastonite 98% Non-Fibrous
17-08-02797-017  6-1		White Pliable; Homogeneous  <i>Interior Door Caulk</i>	NAD	100% Non-Fibrous
17-08-02797-018  6-2		White Pliable; Homogeneous  <i>Interior Door Caulk</i>	NAD	100% Non-Fibrous
17-08-02797-019  7-1		Gray Pliable; Homogeneous  <i>Grey Duct Mastic</i>	NAD	1% Cellulose 99% Non-Fibrous
17-08-02797-020  7-2		Gray Pliable; Homogeneous  <i>Grey Duct Mastic</i>	NAD	1% Cellulose 99% Non-Fibrous
17-08-02797-021  8-1		Pale Gray to Tan Fibrous; White Brittle; Inhomogeneous  <i>Pinhole/Divot Ceiling Tile</i>	NAD	45% Cellulose 30% Fibrous Glass 25% Non-Fibrous
17-08-02797-022  8-2		Pale Gray to Tan Fibrous; White Brittle; Inhomogeneous  <i>Pinhole/Divot Ceiling Tile</i>	NAD	45% Cellulose 30% Fibrous Glass 25% Non-Fibrous

## Environmental Hazards Services, L.L.C

**Client Number:** 200608  
**Project/Test Address:** RCPS - Masons Cove Elementary;  
 Roanoke, VA

**Report Number:** 17-08-02797

Lab Sample Number <i>Client Sample Number</i>	Layer Type	Lab Gross Description <i>Client Sample Description</i>	Asbestos	Other Materials
17-08-02797-023  8-3		Pale Gray to Tan Fibrous; White Brittle; Inhomogeneous  <i>Pinhole/Divot Ceiling Tile</i>	NAD	45% Cellulose 30% Fibrous Glass 25% Non-Fibrous
17-08-02797-024A  9-1	Drywall	Off-White Brittle; Tan/Off-White Fibrous; Inhomogeneous  <i>Drywall and Joint Compound Wall</i>	NAD	10% Cellulose 10% Fibrous Glass 80% Non-Fibrous
17-08-02797-024B  9-1	Joint Comp.	White Brittle; Homogeneous  <i>Drywall and Joint Compound Wall</i>	NAD	2% Cellulose 98% Non-Fibrous
17-08-02797-025A  9-2	Drywall	Off-White Brittle; Tan/Pale Beige Fibrous; Inhomogeneous  <i>Drywall and Joint Compound Wall</i>	NAD	30% Cellulose 5% Fibrous Glass 65% Non-Fibrous
17-08-02797-025B  9-2	Joint Comp.	White Brittle; Pale Beige Pliable to Brittle; Inhomogeneous  <i>Drywall and Joint Compound Wall</i>	NAD	1% Cellulose 99% Non-Fibrous
17-08-02797-026  10-1		Pale Gray Fibrous; White Brittle; Inhomogeneous  <i>Smooth Ceiling Tile</i>	NAD	45% Cellulose 35% Fibrous Glass 20% Non-Fibrous
17-08-02797-027  10-2		Pale Gray Fibrous; White Brittle; Inhomogeneous  <i>Smooth Ceiling Tile</i>	NAD	45% Cellulose 35% Fibrous Glass 20% Non-Fibrous

## Environmental Hazards Services, L.L.C

**Client Number:** 200608  
**Project/Test Address:** RCPS - Masons Cove Elementary;  
 Roanoke, VA

**Report Number:** 17-08-02797

Lab Sample Number <i>Client Sample Number</i>	Layer Type	Lab Gross Description <i>Client Sample Description</i>	Asbestos	Other Materials
17-08-02797-028  11-1		Pale Gray to Tan Fibrous; White Brittle; Inhomogeneous  <i>Leaf Pattern Ceiling Tile</i>	NAD	40% Cellulose 40% Fibrous Glass 20% Non-Fibrous
17-08-02797-029  11-2		Pale Gray to Tan Fibrous; White Brittle; Inhomogeneous  <i>Leaf Pattern Ceiling Tile</i>	NAD	40% Cellulose 40% Fibrous Glass 20% Non-Fibrous
17-08-02797-030  12-1		Red Pliable; Homogeneous  <i>Red Fire Stop</i>	NAD	8% Fibrous Glass 92% Non-Fibrous
17-08-02797-031  12-2		Red Pliable; Homogeneous  <i>Red Fire Stop</i>	NAD	8% Fibrous Glass 92% Non-Fibrous
17-08-02797-032A  13-1	Flooring	Gray/Off-White Brittle; Homogeneous  <i>Grey Aggregate 12"x12" Floor Tile and Mastic</i>	NAD	100% Non-Fibrous
17-08-02797-032B  13-1	Mastic	Yellow Adhesive; Homogeneous  <i>Grey Aggregate 12"x12" Floor Tile and Mastic</i>	NAD	1% Cellulose 1% Synthetic 98% Non-Fibrous
17-08-02797-033A  13-2	Flooring	Gray/Off-White Brittle; Homogeneous  <i>Grey Aggregate 12"x12" Floor Tile and Mastic</i>	NAD	100% Non-Fibrous

## Environmental Hazards Services, L.L.C

**Client Number:** 200608  
**Project/Test Address:** RCPS - Masons Cove Elementary;  
 Roanoke, VA

**Report Number:** 17-08-02797

Lab Sample Number <i>Client Sample Number</i>	Layer Type	Lab Gross Description <i>Client Sample Description</i>	Asbestos	Other Materials
17-08-02797-033B  13-2	Mastic	Pale Yellow Adhesive; Homogeneous  <i>Grey Aggregate 12"x12" Floor Tile and Mastic</i>	NAD	1% Cellulose 99% Non-Fibrous
17-08-02797-034A  14-1	Flooring	Pale Tan/Off-White Brittle; Homogeneous  <i>Tan Pebble 12"x12" Floor Tile and Mastic</i>	NAD	1% Cellulose 99% Non-Fibrous
17-08-02797-034B  14-1	Mastic	Pale Yellow Adhesive; Homogeneous  <i>Tan Pebble 12"x12" Floor Tile and Mastic</i>	NAD	2% Cellulose 98% Non-Fibrous
17-08-02797-035A  14-2	Flooring	Pale Tan/Off-White Brittle; Homogeneous  <i>Tan Pebble 12"x12" Floor Tile and Mastic</i>	NAD	100% Non-Fibrous
17-08-02797-035B  14-2	Mastic	Pale Yellow Adhesive; Homogeneous  <i>Tan Pebble 12"x12" Floor Tile and Mastic</i>	NAD	1% Cellulose 1% Synthetic 98% Non-Fibrous
17-08-02797-036A  15-1	Flooring	Green/Dark Gray Brittle; Homogeneous  <i>Green Aggregate 12"x12" Floor Tile and Mastic</i>	NAD	100% Non-Fibrous
17-08-02797-036B  15-1	Mastic	Pale Yellow Adhesive; Homogeneous  <i>Green Aggregate 12"x12" Floor Tile and Mastic</i>	NAD	2% Cellulose 1% Synthetic 97% Non-Fibrous

# Environmental Hazards Services, L.L.C

**Client Number:** 200608  
**Project/Test Address:** RCPS - Masons Cove Elementary;  
 Roanoke, VA

**Report Number:** 17-08-02797

Lab Sample Number <i>Client Sample Number</i>	Layer Type	Lab Gross Description <i>Client Sample Description</i>	Asbestos	Other Materials
17-08-02797-036C  15-1	Other *	Gray Brittle; Homogeneous  <i>Green Aggregate 12"x12" Floor Tile and Mastic</i>	NAD	3% Cellulose 97% Non-Fibrous
<b>* Leveling Compound-Type Substrate</b>				
17-08-02797-037A  15-2	Flooring	Green/Dark Gray/Off-White Brittle; Homogeneous  <i>Green Aggregate 12"x12" Floor Tile and Mastic</i>	NAD	1% Cellulose 99% Non-Fibrous
17-08-02797-037B  15-2	Mastic	Pale Yellow Adhesive; Homogeneous  <i>Green Aggregate 12"x12" Floor Tile and Mastic</i>	NAD	1% Cellulose 1% Synthetic 98% Non-Fibrous
17-08-02797-038A  16-1	Flooring	Pale Red/Dark Gray/Off-White Brittle; Homogeneous  <i>Red Aggregate 12"x12" Floor Tile and Mastic</i>	NAD	100% Non-Fibrous
17-08-02797-038B  16-1	Mastic	Pale Yellow Adhesive; Homogeneous  <i>Red Aggregate 12"x12" Floor Tile and Mastic</i>	NAD	1% Cellulose 99% Non-Fibrous
17-08-02797-039A  16-2	Flooring	Pale Red/Dark Gray/Off-White Brittle; Homogeneous  <i>Red Aggregate 12"x12" Floor Tile and Mastic</i>	NAD	100% Non-Fibrous
17-08-02797-039B  16-2	Mastic	Pale Yellow Adhesive; Homogeneous  <i>Red Aggregate 12"x12" Floor Tile and Mastic</i>	NAD	1% Cellulose 1% Synthetic 98% Non-Fibrous



## Environmental Hazards Services, L.L.C

**Client Number:** 200608  
**Project/Test Address:** RCPS - Masons Cove Elementary;  
 Roanoke, VA

**Report Number:** 17-08-02797

Lab Sample Number <i>Client Sample Number</i>	Layer Type	Lab Gross Description <i>Client Sample Description</i>	Asbestos	Other Materials
17-08-02797-040  17-1		Gray Pliable; Homogeneous  <i>Grey Duct Mastic</i>	NAD	1% Cellulose 1% Synthetic 98% Non-Fibrous
17-08-02797-041  17-2		Gray Pliable; Homogeneous  <i>Grey Duct Mastic</i>	NAD	1% Cellulose 2% Synthetic 97% Non-Fibrous
17-08-02797-042A  18-1	Flooring	Gray Granular; Homogeneous  <i>Grey Mottled 12"x12" Floor Tile and Mastic</i>	NAD	100% Non-Fibrous
17-08-02797-042B  18-1	Mastic	Pale Yellow Adhesive; Homogeneous  <i>Grey Mottled 12"x12" Floor Tile and Mastic</i>	NAD	2% Cellulose 98% Non-Fibrous
17-08-02797-043A  18-2	Flooring	Gray Granular; Homogeneous  <i>Grey Mottled 12"x12" Floor Tile and Mastic</i>	NAD	1% Cellulose 99% Non-Fibrous
17-08-02797-043B  18-2	Mastic	Pale Yellow Adhesive; Homogeneous  <i>Grey Mottled 12"x12" Floor Tile and Mastic</i>	NAD	2% Cellulose 98% Non-Fibrous
17-08-02797-044A  19-1	Drywall	Tan Fibrous; White Brittle; Inhomogeneous  <i>Drywall and Joint Compound Ceiling</i>	NAD	55% Cellulose 2% Fibrous Glass 43% Non-Fibrous

## Environmental Hazards Services, L.L.C

**Client Number:** 200608  
**Project/Test Address:** RCPS - Masons Cove Elementary;  
 Roanoke, VA

**Report Number:** 17-08-02797

Lab Sample Number <i>Client Sample Number</i>	Layer Type	Lab Gross Description <i>Client Sample Description</i>	Asbestos	Other Materials
17-08-02797-044B  19-1	Other *	White Brittle; Off-White Fibrous; Inhomogeneous  <i>Drywall and Joint Compound Ceiling</i>	NAD	2% Cellulose 10% Fibrous Glass 88% Non-Fibrous
* Joint Compound and Embedded Seam Tape				
17-08-02797-045A  19-2	Drywall	Off-White Brittle; Tan Fibrous; Inhomogeneous  <i>Drywall and Joint Compound Ceiling</i>	NAD	17% Cellulose 3% Fibrous Glass 80% Non-Fibrous
17-08-02797-045B  19-2	Joint Comp.	White Brittle; Homogeneous  <i>Drywall and Joint Compound Ceiling</i>	NAD	1% Cellulose 1% Wollastonite 98% Non-Fibrous

# Environmental Hazards Services, L.L.C

**Client Number:** 200608  
**Project/Test Address:** RCPS - Masons Cove Elementary;  
Roanoke, VA

**Report Number:** 17-08-02797

Lab Sample Number <i>Client Sample Number</i>	Layer Type	Lab Gross Description <i>Client Sample Description</i>	Asbestos	Other Materials
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**QC Sample:** 81-M22014-3, 86-M22013-3  
**QC Blank:** SRM 1866 Fiberglass  
**Reporting Limit:** 1% Asbestos  
**Method:** EPA Method 600/R-93/116, EPA Method 600/M4-82-020  
**Analyst:** Mark Case



Reviewed By Authorized Signatory:

Tasha Eaddy  
QA/QC Clerk

The condition of the samples analyzed was acceptable upon receipt per laboratory protocol unless otherwise noted on this report. Each distinct component in an inhomogeneous sample was analyzed separately and reported as a composite. Results represent the analysis of samples submitted by the client. Sample location, description, area, volume, etc., was provided by the client. This report cannot be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without the written consent of the Environmental Hazards Service, L.L.C. California Certification #2319 NY ELAP #11714 NVLAP #101882-0 VELAP 460172. All information concerning sampling location, date, and time can be found on Chain-of-Custody. Environmental Hazards Services, L.L.C. does not perform any sample collection.

Environmental Hazards Services, L.L.C. recommends reanalysis by point count (for more accurate quantification) or Transmission Electron Microscopy (TEM), (for enhanced detection capabilities) for materials regulated by EPA NESHAP (National Emission Standards for Hazardous Air Pollutants) and found to contain less than ten percent (<10%) asbestos by polarized light microscopy (PLM). Both services are available for an additional fee.

400 Point Count Analysis, where noted, performed per EPA Method 600/R-93/116 with a Reporting Limit of 0.25%.

\* All California samples analyzed by Polarized Light Microscopy, EPA Method 600/M4-82-020, Dec. 1982.

LEGEND: NAD = no asbestos detected

46 PLM

\* LAB NOTE: NO SAMPLE NUMBERED  
"12-3" RECEIVED, MJE 08-21-17



# Asbestos Chain-of-Custody

Environmental Hazards Services, LLC

7469 Whitepine Rd, Richmond, VA 23237

(800) 347-4010

[www.leadlab.com](http://www.leadlab.com)

Company Name: ECS Mid-Atlantic, LLC Address: 7670 Enon Dr. # 101 City/State/Zip: Roanoke/VA/24109  
 Phone: 540-362-2000 e-Mail: amoon@ecslimited.com Acct No. \_\_\_\_\_  
 Project Name: RCPS - Masons Cove Elementary rcurran@ecslimited.com City/State: Roanoke/VA  
 Collected By: Robert Curran PO# 47:3555  
 Positive Stop Analysis:  Yes  No \*Analyze All Drywall/Joint Compound Date Collected: 8/17/2017

Turn Around Time: If no TAT is specified, samples will be processed as 3-Day TAT

1-Day 2-Day  3-Day Same Day Analysis: PLM

No.	Client Sample ID	Sample Location
1-1	White CMU Wall Coating	Cafeteria Storage
1-2	White CMU Wall Coating	Office 106
1-3	White CMU Wall Coating	Gym
1-4	White CMU Wall Coating	Hall @ East Staircase
1-5	White CMU Wall Coating	Hall @ West Staircase
1-6	White CMU Wall Coating	Room 208
1-7	White CMU Wall Coating	Room 203 Computer Lab
2-1	Concrete Floor Seam Caulk	Hall @ Guidance Office
2-2	Concrete Floor Seam Caulk	Hall West End of 1st Floor
2-3 *	Grey Mottled 12"x12" Floor Tile and Mastic	Room 409
3-1	Grey 4" Vinyl Cove Baseboard	Room 115 Storage
3-2	Grey 4" Vinyl Cove Baseboard	Room 126
3-3	Grey 4" Vinyl Cove Baseboard	Room 212
4-1	White Fiberglass Insulation Mastic	Mechanical Room
4-2	White Fiberglass Insulation Mastic	Mechanical Room
5-1	Black 90° Vinyl Cove Baseboard	Stage
5-2	Black 90° Vinyl Cove Baseboard	Gym
6-1	Interior Door Caulk	Computer Lab Room 109
6-2	Interior Door Caulk	Room 201
7-1	Grey Duct Mastic	Water Tower Building
7-2	Grey Duct Mastic	Water Tower Building
8-1	Pinhole/Divot Ceiling Tile	Music Room 114
8-2	Pinhole/Divot Ceiling Tile	Hall @ Office Workroom
8-3	Pinhole/Divot Ceiling Tile	Hall @ Room 208
9-1	Drywall and Joint Compound Wall	Hall @ Office Workroom
9-2	Drywall and Joint Compound Wall	Hall @ West Staircase
10-1	Smooth Ceiling Tile	Kitchen
10-2	Smooth Ceiling Tile	Kitchen
11-1	Leaf Pattern Ceiling Tile	Main Office
11-2	Leaf Pattern Ceiling Tile	Hall @ Exit 5
12-1	Red Fire Stop	Hall @ Room 205
12-2	Red Fire Stop	Hall @ Room 208
13-1	Grey Aggregate 12"x12" Floor Tile and Mastic	East End 2nd Floor Hall
13-2	Grey Aggregate 12"x12" Floor Tile and Mastic	Hall @ Room 214
14-1	Tan Pebble 12"x12" Floor Tile and Mastic	Hall @ Room 213
14-2	Tan Pebble 12"x12" Floor Tile and Mastic	Hall @ Room 216
15-1	Green Aggregate 12"x12" Floor Tile and Mastic	Hall @ Room 207
15-2	Green Aggregate 12"x12" Floor Tile and Mastic	Hall @ Room 211
16-1	Red Aggregate 12"x12" Floor Tile and Mastic	Hall @ Room 200
16-2	Red Aggregate 12"x12" Floor Tile and Mastic	Hall @ Room 200
17-1	Grey Duct Mastic	Music Room 114
17-2	Grey Duct Mastic	Hall @ Room 208
18-1	Grey Mottled 12"x12" Floor Tile and Mastic	Room 202
18-2	Grey Mottled 12"x12" Floor Tile and Mastic	Room 206
19-1	Drywall and Joint Compound Ceiling	Room 131
19-2	Drywall and Joint Compound Ceiling	Room 131
Released By:	Robert Curran, 08-17-17, 18:33 <i>Robert Curran</i>	Please apply special pricing
	<i>Jhb</i> <i>8/21/17</i> <i>119</i>	Please do not analyze fiberglass or CMU block layers

17-08-02797



Due Date:  
08/24/2017  
(Thursday)  
ER

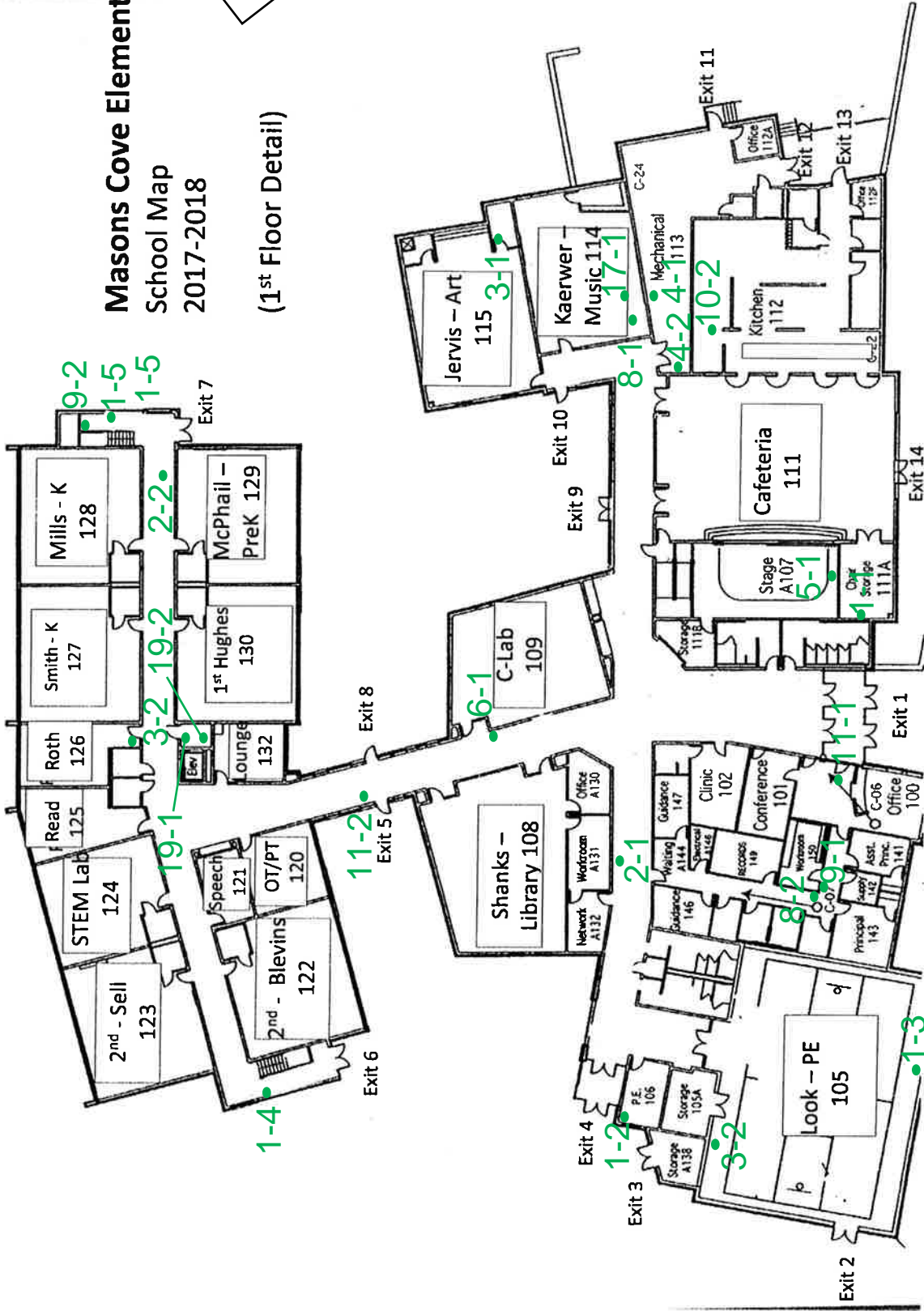
*MJE*

# **Appendix IV: Drawings**

● Sample Location

### Masons Cove Elementary School School Map 2017-2018

(1<sup>st</sup> Floor Detail)

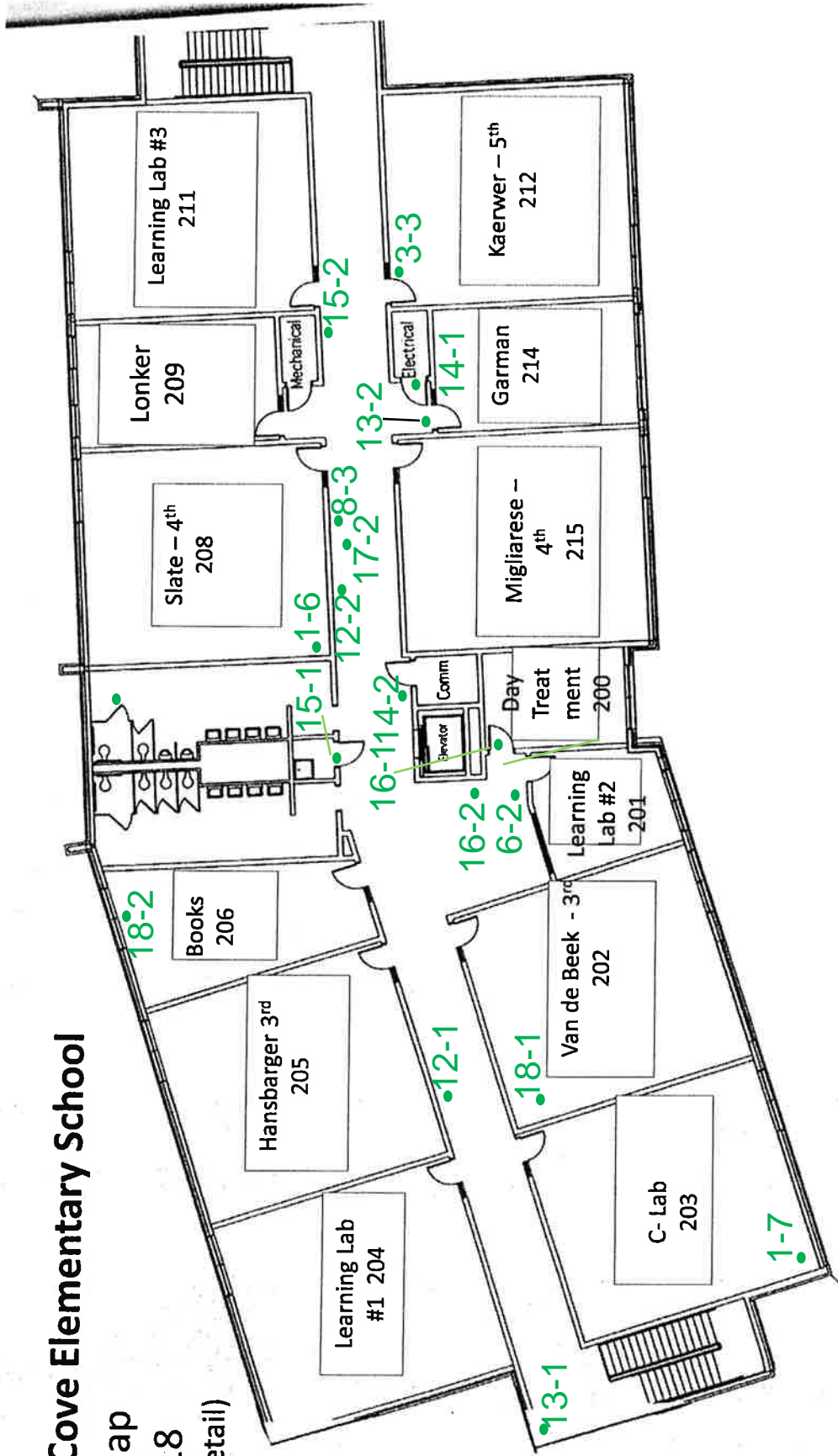


# Masons Cove Elementary School

## School Map

2017-2018

(2<sup>nd</sup> Floor Detail)



# **Appendix V: Certifications/ Licenses**



# DPOR License Lookup License Number

## 3303003809

### License Details

<b>Name</b>	CURRAN, ROBERT WILLIAM
<b>License Number</b>	3303003809
<b>License Description</b>	Asbestos Inspector License
<b>Rank</b>	Asbestos Inspector
<b>Address</b>	RICHMOND, VA 23220-0000
<b>Initial Certification Date</b>	2012-11-30
<b>Expiration Date</b>	2017-11-30

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