



# HAZARDOUS MATERIALS ASSESSMENT

Evaluation of Existing Conditions

**REPORT  
FOR  
HAZARDOUS MATERIALS IDENTIFICATION STUDY  
AT  
FALL RIVER HIGH SCHOOL  
FALL RIVER, MA**

PROJECT NUMBER:  
217 041.00

SURVEY DATES:  
JANUARY 23-27, 2017

**STUDY CONDUCTED BY:**  
**UNIVERSAL ENVIRONMENTAL CONSULTANTS  
12 BREWSTER ROAD  
FRAMINGHAM, MASSACHUSETTS**



February 13, 2017

Mr. Troy Randall  
Ai3 Architects LLC  
526 Boston Post Road  
Wayland, MA 01778

Reference: **Hazardous Materials Identification Survey**  
**Fall River High School, Fall River, MA**

Dear Mr. Randall:

Thank you for the opportunity for Universal Environmental Consultants (UEC) to provide professional services.

Enclosed please find the report for the Identification Survey for accessible Asbestos Containing Materials and other hazardous materials at Fall River High School, Fall River, MA.

Please do not hesitate to contact me at (508) 628-5486 if you have any questions.

Very truly yours,

Universal Environmental Consultants

A handwritten signature in blue ink, appearing to read "Ammar Dieb", is written over a horizontal line.

Ammar Dieb  
President

UEC:\217 041.00\Report.DOC

Enclosure

## 1.0 INTRODUCTION:

Universal Environmental Consultants (UEC) has been providing comprehensive asbestos services since 2001 and has completed projects throughout New England. We have completed projects for a variety of clients including commercial, industrial, municipal, and public and private schools. We maintain appropriate asbestos licenses and staff with a minimum of fifteen years of experience.

UEC was contracted by Ai3 Architects LLC to conduct the following services at the Fall River High School, Fall River, Massachusetts:

- Asbestos Containing Materials (ACM) inspection and sampling;
- Polychlorinated Biphenyls (PCB's)-Electrical Equipment and Light Fixtures inspection;
- PCB's Caulking inspection;
- Lead Based Paint (LBP) inspection;
- Airborne Mold sampling;
- Mercury in Rubber Flooring inspection and sampling;
- Radon sampling;
- Creosol inspection.

The scope of work included the inspection of accessible ACM, collection of bulk samples, determination and quantities of types of ACM found and cost estimates for remediation. A comprehensive survey per the Environmental Protection Agency (EPA) NESHAP regulation would be required prior to any renovation or demolition activities.

Bulk samples analyses for asbestos were performed using the standard Polarized Light Microscopy (PLM) Method in accordance with EPA standard. Bulk samples were collected by a Massachusetts licensed asbestos inspector Mr. Leonard J. Busa (AI-030673) and analyzed by a Massachusetts licensed laboratory Asbestos Identification Laboratory, Woburn, MA. Previous bulk sampling was performed as part of the AHERA inspection of the school. Bulk samples were collected by a Massachusetts licensed asbestos inspector Leonard J. Busa and analyzed by Asbestos Identification Laboratory.

Airborne mold samples were analyzed by an EPA trained laboratory EMSL, Woburn, MA.

Mercury samples were analyzed by an EPA licensed laboratory, EMSL, Cinnaminson, NJ in accordance with EPA method 7471B.

Radon samples were analyzed by an EPA licensed laboratory AccuStar, Medway, MA.

Samples results are attached.

## 2.0 FINDINGS:

### Asbestos Containing Materials (ACM):

The regulations for asbestos inspection are based on representative sampling. It would be impractical and costly to sample all materials in all areas. Therefore, representative samples of each homogenous area were collected and analyzed or assumed.

All suspect materials were grouped into homogenous areas. By definition a homogenous area is one in which the materials are evenly mixed and similar in appearance and texture throughout. A homogeneous area shall be determined to contain asbestos based on findings that the results of at least one sample collected from that area shows that asbestos is present in an amount greater than 1 percent in accordance with EPA regulations. Per the Department of Environmental Protection (DEP) any amount of asbestos found must be disposed as asbestos.

No additional suspect and accessible ACM were found during this survey. However, hidden ACM may be found during the renovation and demolition activities.

***Number of Samples Collected:***

One Hundred Thirty-two (132) bulk samples were collected from materials suspected of containing asbestos, including:

**Type and Location of Suspect Material**

1. Tar and gravel roof at center auditorium at metal deck
2. Tar and gravel roof at center auditorium at metal deck
3. Residue in channel of metal deck at first floor roof
4. Coating on concrete deck at over 85
5. Associated paper with coating on concrete deck at over 85
6. Coating on concrete deck at over 460
7. Coating on concrete deck at over 433
8. Coating on concrete deck at over 404
9. White glazing for type II windows at roof over 51-82
10. White glazing for type II windows at roof over 51-82
11. Exterior fireproofing at rear of cafeteria as debris
12. Exterior fireproofing at rear of cafeteria as debris
13. Exterior fireproofing at rear of cafeteria as debris
14. Exterior fireproofing at main entrance covered walkway
15. Exterior fireproofing at main entrance covered walkway
16. Grey door framing caulking at main entrance
17. Grey door framing caulking at door 5
18. Brown interior door framing caulking for exterior door at rear of cafeteria
19. Brown interior door framing caulking for exterior door at exit door by 134
20. Plaster over exterior window at rear pool building
21. Exterior transite siding as debris at 373
22. Exterior transite siding at gymnasium
23. Grey window framing caulking at west main entrance
24. Grey window framing caulking at 147
25. Window glazing caulking for original window west main entrance
26. Window glazing caulking for original window at door 25
27. Soft grey glazing caulking for new window at registrar's –supply
28. Ceiling plaster type I at auditorium in projector booth
29. Ceiling plaster type I at auditorium in projector booth
30. Ceiling plaster type I at varsity girl's locker room
31. Ceiling plaster type I at girl's locker room by PE
32. Ceiling plaster type I at girl's locker room at bathrooms
33. Ceiling plaster type I at electric room by 515
34. Ceiling plaster type I at custodian room at hall to shops
35. Ceiling plaster type I at boy's locker room by showers
36. Exposed glue daub on CMU wall at chalkboard/tack board
37. Mastic for wood block floor at room 55 woodshop
38. Mastic in cork running perimeter of room 55 wood block floor
39. Mastic for wood block floor at room 56 former woodshop
40. Mastic in cork running perimeter of room 56 wood block floor
41. Interior door framing caulking at classroom 115
42. Interior door framing caulking at rear of stage workroom
43. Interior door framing caulking at catwalk entrance
44. Interior door framing caulking at girls' varsity locker room
45. Interior door framing caulking at electric room by 515
46. Interior door framing caulking at room 520 former nurse room

47. Glazing for mesh window in metal door at classroom 134
48. Glazing for mesh window in metal door at classroom 130
49. Glazing for mesh window in metal door at classroom 302
50. Glazing caulking for interior window at room 520
51. Non suspect pressed wood lab table at room 311/312
52. Non suspect pressed wood lab table at room 307
53. Hard brown lab counter table at room 311/312
54. Hard brown lab counter table at room 302
55. Hard brown lab counter table at room 4<sup>th</sup> floor science room
56. 1' x 1' Acoustical ceiling tile at freshman class office
57. 1' x 1' Acoustical ceiling tile at wrestle room off gymnasium
58. 1' x 1' Acoustical ceiling tile at IT room
59. Resin floor at girl's locker room
60. Resin floor at room 111
61. Orange linoleum at hallway by 62
62. Adhesive on orange linoleum at hallway by 62
63. Linoleum type I greenish at 112 storage
64. Linoleum type IA grey at cafeteria
65. Linoleum type IA grey at rear cafeteria
66. Linoleum type I grey at registrar's
67. Linoleum type IAA grey at PIC wing
68. Linoleum type IAAA brown at boy's locker room
69. Linoleum type II red spots at classroom 123
70. Hard joint elbows off fiberglass at room 146 break room
71. Hard joint elbows off fiberglass at room 146 break room valve
72. Hard joint elbows off fiberglass at custodial storage by 227
73. Duct insulation at pool building basement boiler room
74. Duct insulation at pool building basement boiler room
75. Duct insulation at pool building basement boiler room
76. Debris beside boiler at behind metal jacketing
77. Debris beside boiler at behind metal jacketing
78. Black sink damproofing at classroom 130
79. Black sink damproofing at room 520
80. Black sink damproofing at room 346 lounge
81. Tape on metal duct at pool building roof mechanical room
82. Tape on metal duct at pool building roof mechanical room
83. Vertical expansion joint in at pool building roof mechanical room
84. Hard joint elbow debris on CMU metal duct at gymnasium building roof mechanical
85. Mud at flange end of fiberglass pipe insulation gym building roof mechanical
86. Roof drain hard joint elbow off fiberglass at gym building roof mechanical
87. Adhesive for fancy gymnasium wall at classroom 363
88. Adhesive for fancy gymnasium wall at classroom 362
89. Joint compound at classroom 385
90. Joint compound at classroom 314
91. Joint compound at classroom 362
92. Joint compound at library
93. Joint compound at lobby at main entrance
94. Joint compound at hallway by 403
95. Joint compound at woodshop right
96. Linoleum type IAAA brown at auditorium entrance vestibule
97. Interior window glazing caulking at auditorium entrance vestibule
98. 12" x 12" Red vinyl floor tile at pool building lobby
99. Adhesive on 12" x 12" red vinyl floor tile at pool building lobby
100. 12" x 12" black trim tile at pool building lobby
101. 12" x 12" black trim tile at main lobby
102. 12" x 12" black trim tile at third floor west main lobby

103. 12" x 12" Red spots vinyl floor tile at main lobby
104. 12" x 12" Red spots vinyl floor tile at main lobby
105. 12" x 12" Grey vinyl floor tile type I at hall outside performing arts
106. Black mastic on 12" x 12" grey vinyl floor tile type I at hall outside performing arts
107. 12" x 12" Grey vinyl floor tile type I at room 520
108. Black mastic on 12" x 12" grey vinyl floor tile type I at room 520
109. 12" x 12" Crème vinyl floor tile type II at second floor top of stairs
110. 12" x 12" White w/brown spots vinyl floor tile type III at hall 371 wing
111. 12" x 12" White w/brown spots vinyl floor tile type III at lobby, 256 wing
112. Adhesive on 12" x 12" White w/brown spots vinyl floor tile type III at lobby, 256 wing
113. Coating in wall speaker enclosure at room 77
114. Black mastic for rubber flooring at ramp to gymnasium
115. Grey window framing caulking at exterior cafeteria window
116. Rubber floor at gymnasium
117. 12" x 12" Grey vinyl floor tile type I at hall to PIC wing
118. Black mastic on 12" x 12" grey vinyl floor tile type I at hall to PIC wing
119. Painted finish on CMU at cafeteria red/black concession stand
120. Painted finish on CMU at room 106
121. Carpet glue at library
122. Carpet glue at second floor main office
123. Carpet glue at 261 wing
124. 12" x 12" White w/brown spots vinyl floor tile type III at hall by room 400
125. 12" x 12" Older grey vinyl floor tile type IV at room 400 sophomore office
126. Tan leveler on 12" x 12" Older grey vinyl floor tile type IV at room 400
127. 12" x 12" Crème w/colors vinyl floor tile type V at library T.V. classroom
128. Hard brown lab table sink at library T.V. studio
129. Thick grey caulking between exterior window at concrete column
130. Hard lime green adhesive for Styrofoam panel at outside wall over gypsum
131. Joint compound as skim at outside wall, hall outside second floor custodian
132. Hard lime green adhesive for Styrofoam panel at gypsum wall

**Sample Results:**

**Type and Location of Suspect Material**

**Sample Result**

1. Tar and gravel roof at center auditorium at metal deck	No Asbestos Detected
2. Tar and gravel roof at center auditorium at metal deck	No Asbestos Detected
3. Residue in channel of metal deck at first floor roof	No Asbestos Detected
4. Coating on concrete deck at over 85	No Asbestos Detected
5. Associated paper with coating on concrete deck at over 85	No Asbestos Detected
6. Coating on concrete deck at over 460	<1% Asbestos
7. Coating on concrete deck at over 433	No Asbestos Detected
8. Coating on concrete deck at over 404	No Asbestos Detected
9. White glazing for type II windows at roof over 51-82	No Asbestos Detected
10. White glazing for type II windows at roof over 51-82	No Asbestos Detected
11. Exterior fireproofing at rear of cafeteria as debris	No Asbestos Detected
12. Exterior fireproofing at rear of cafeteria as debris	No Asbestos Detected
13. Exterior fireproofing at rear of cafeteria as debris	No Asbestos Detected
14. Exterior fireproofing at main entrance covered walkway	No Asbestos Detected
15. Exterior fireproofing at main entrance covered walkway	No Asbestos Detected
16. Grey door framing caulking at main entrance	No Asbestos Detected
17. Grey door framing caulking at door 5	No Asbestos Detected
18. Brown interior door framing caulking for exterior door at rear of cafeteria	No Asbestos Detected
19. Brown interior door framing caulking for exterior door at exit door by 134	No Asbestos Detected
20. Plaster over exterior window at rear pool building	No Asbestos Detected
21. Exterior transite siding as debris at 373	10% Asbestos

22. Exterior transite siding at gymnasium	10% Asbestos
23. Grey window framing caulking at west main entrance	No Asbestos Detected
24. Grey window framing caulking at 147	No Asbestos Detected
25. Window glazing caulking for original window west main entrance	20% Asbestos
26. Window glazing caulking for original window at door 25	No Asbestos Detected
27. Soft grey glazing caulking for new window at registrar's –supply	No Asbestos Detected
28. Ceiling plaster type I at auditorium in projector booth	No Asbestos Detected
29. Ceiling plaster type I at auditorium in projector booth	No Asbestos Detected
30. Ceiling plaster type I at varsity girl's locker room	No Asbestos Detected
31. Ceiling plaster type I at girl's locker room by PE	No Asbestos Detected
32. Ceiling plaster type I at girl's locker room at bathrooms	No Asbestos Detected
33. Ceiling plaster type I at electric room by 515	No Asbestos Detected
34. Ceiling plaster type I at custodian room at hall to shops	No Asbestos Detected
35. Ceiling plaster type I at boy's locker room by showers	No Asbestos Detected
36. Exposed glue daub on CMU wall at chalkboard/tack board	No Asbestos Detected
37. Mastic for wood block floor at room 55 woodshop	No Asbestos Detected
38. Mastic in cork running perimeter of room 55 wood block floor	No Asbestos Detected
39. Mastic for wood block floor at room 56 former woodshop	No Asbestos Detected
40. Mastic in cork running perimeter of room 56 wood block floor	No Asbestos Detected
41. Interior door framing caulking at classroom 115	10% Asbestos
42. Interior door framing caulking at rear of stage workroom	10% Asbestos
43. Interior door framing caulking at catwalk entrance	10% Asbestos
44. Interior door framing caulking at girls' varsity locker room	10% Asbestos
45. Interior door framing caulking at electric room by 515	10% Asbestos
46. Interior door framing caulking at room 520 former nurse room	10% Asbestos
47. Glazing for mesh window in metal door at classroom 134	5% Asbestos
48. Glazing for mesh window in metal door at classroom 130	5% Asbestos
49. Glazing for mesh window in metal door at classroom 302	2% Asbestos
50. Glazing caulking for interior window at room 520	No Asbestos Detected
51. Non suspect pressed wood lab table at room 311/312	No Asbestos Detected
52. Non suspect pressed wood lab table at room 307	No Asbestos Detected
53. Hard brown lab counter table at room 311/312	No Asbestos Detected
54. Hard brown lab counter table at room 302	No Asbestos Detected
55. Hard brown lab counter table at room 4 <sup>th</sup> floor science room	No Asbestos Detected
56. 1' x 1' Acoustical ceiling tile at freshman class office	No Asbestos Detected
57. 1' x 1' Acoustical ceiling tile at wrestle room off gymnasium	No Asbestos Detected
58. 1' x 1' Acoustical ceiling tile at IT room	No Asbestos Detected
59. Resin floor at girl's locker room	No Asbestos Detected
60. Resin floor at room 111	No Asbestos Detected
61. Orange linoleum at hallway by 62	40% Asbestos
62. Adhesive on orange linoleum at hallway by 62	No Asbestos Detected
63. Linoleum type I greenish at 112 storage	30% Asbestos
64. Linoleum type IA grey at cafeteria	3% Asbestos
65. Linoleum type IA grey at rear cafeteria	30% Asbestos
66. Linoleum type I grey at registrar's	40% Asbestos
67. Linoleum type IAA grey at PIC wing	40% Asbestos
68. Linoleum type IAAA brown at boy's locker room	40% Asbestos
69. Linoleum type II red spots at classroom 123	No Asbestos Detected
70. Hard joint elbows off fiberglass at room 146 break room	No Asbestos Detected
71. Hard joint elbows off fiberglass at room 146 break room valve	No Asbestos Detected
72. Hard joint elbows off fiberglass at custodial storage by 227	No Asbestos Detected
73. Duct insulation at pool building basement boiler room	10% Asbestos
74. Duct insulation at pool building basement boiler room	No Asbestos Detected
75. Duct insulation at pool building basement boiler room	No Asbestos Detected
76. Debris beside boiler at behind metal jacketing	No Asbestos Detected
77. Debris beside boiler at behind metal jacketing	No Asbestos Detected

78.	Black sink damproofing at classroom 130	5% Asbestos
79.	Black sink damproofing at room 520	3% Asbestos
80.	Black sink damproofing at room 346 lounge	5% Asbestos
81.	Tape on metal duct at pool building roof mechanical room	No Asbestos Detected
82.	Tape on metal duct at pool building roof mechanical room	No Asbestos Detected
83.	Vertical expansion joint in CMU at pool building roof mechanical room	2% Asbestos
84.	Hard joint elbow debris on metal duct at gymnasium building roof mechanical	No Asbestos Detected
85.	Mud at flange end of fiberglass pipe insulation gym building roof mechanical	No Asbestos Detected
86.	Roof drain hard joint elbow off fiberglass at gym building roof mechanical	No Asbestos Detected
87.	Adhesive for fancy gymnasium wall at classroom 363	No Asbestos Detected
88.	Adhesive for fancy gymnasium wall at classroom 362	No Asbestos Detected
89.	Joint compound at classroom 385	No Asbestos Detected
90.	Joint compound at classroom 314	No Asbestos Detected
91.	Joint compound at classroom 362	No Asbestos Detected
92.	Joint compound at library	No Asbestos Detected
93.	Joint compound at lobby at main entrance	No Asbestos Detected
94.	Joint compound at hallway by 403	No Asbestos Detected
95.	Joint compound at woodshop right	No Asbestos Detected
96.	Linoleum type IAAA brown at auditorium entrance vestibule	40% Asbestos
97.	Interior window glazing caulking at auditorium entrance vestibule	No Asbestos Detected
98.	12" x 12" Red vinyl floor tile at pool building lobby	No Asbestos Detected
99.	Adhesive on 12" x 12" red vinyl floor tile at pool building lobby	No Asbestos Detected
100.	12" x 12" black trim tile at pool building lobby	No Asbestos Detected
101.	12" x 12" black trim tile at main lobby	No Asbestos Detected
102.	12" x 12" black trim tile at third floor west main lobby	No Asbestos Detected
103.	12" x 12" Red spots vinyl floor tile at main lobby	No Asbestos Detected
104.	12" x 12" Red spots vinyl floor tile at main lobby	No Asbestos Detected
105.	12" x 12" Grey vinyl floor tile type I at hall outside performing arts	No Asbestos Detected
106.	Black mastic on 12" x 12" grey vinyl floor tile type I at hall outside performing arts	No Asbestos Detected
107.	12" x 12" Grey vinyl floor tile type I at room 520	No Asbestos Detected
108.	Black mastic on 12" x 12" grey vinyl floor tile type I at room 520	No Asbestos Detected
109.	12" x 12" Crème vinyl floor tile type II at second floor top of stairs	No Asbestos Detected
110.	12" x 12" White w/brown spots vinyl floor tile type III at hall 371 wing	No Asbestos Detected
111.	12" x 12" White w/brown spots vinyl floor tile type III at lobby, 256 wing	No Asbestos Detected
112.	Adhesive on 12" x 12" White w/brown vinyl floor tile type III at lobby, 256 wing	No Asbestos Detected
113.	Coating in wall speaker enclosure at room 77	5% Asbestos
114.	Black mastic for rubber flooring at ramp to gymnasium	No Asbestos Detected
115.	Grey window framing caulking at exterior cafeteria window	No Asbestos Detected
116.	Rubber floor at gymnasium	No Asbestos Detected
117.	12" x 12" Grey vinyl floor tile type I at hall to PIC wing	No Asbestos Detected
118.	Black mastic on 12" x 12" grey vinyl floor tile type I at hall to PIC wing	No Asbestos Detected
119.	Painted finish on CMU at cafeteria red/black concession stand	No Asbestos Detected
120.	Painted finish on CMU at room 106	2% Asbestos
121.	Carpet glue at library	No Asbestos Detected
122.	Carpet glue at second floor main office	No Asbestos Detected
123.	Carpet glue at 261 wing	No Asbestos Detected
124.	12" x 12" White w/brown spots vinyl floor tile type III at hall by room 400	No Asbestos Detected
125.	12" x 12" Older grey vinyl floor tile type IV at room 400 sophomore office	No Asbestos Detected
126.	Tan leveler on 12" x 12" Older grey vinyl floor tile type IV at room 400	No Asbestos Detected
127.	12" x 12" Crème w/colors vinyl floor tile type V at library TV. classroom	No Asbestos Detected
128.	Hard brown lab table sink at library TV. studio	No Asbestos Detected
129.	Thick grey caulking between exterior window at concrete column	No Asbestos Detected
130.	Hard lime green adhesive for Styrofoam panel at outside wall over gypsum	5% Asbestos
131.	Joint compound as skim at outside wall, hall outside second floor custodian	No Asbestos Detected
132.	Hard lime green adhesive for Styrofoam panel at gypsum wall	5% Asbestos

**Observations and Conclusions:**

The condition of ACM is very important. ACM in good condition does not present a health issue unless it is disturbed. Therefore, it is not necessary to remediate ACM in good condition unless it will be disturbed through renovation, demolition or other activity.

Refer to the AHERA Management Plan for condition of ACM.

1. Coating on concrete deck was found to contain <1% Asbestos. Per DEP regulations the coating would have to be disposed as asbestos. Additional sampling is recommended.
2. Exterior transite siding as debris was found to contain asbestos. The debris would need to be removed.
3. Exterior transite siding was found to contain asbestos.
4. Window glazing caulking for original windows was found to contain asbestos.
5. Interior door framing caulking was found to contain asbestos.
6. Glazing for mesh window in metal door was found to contain asbestos.
7. Various types of linoleum floor covering were found to contain asbestos.
8. Duct insulation at pool building basement boiler room was found to contain asbestos.
9. Sink coating was found to contain asbestos.
10. Vertical expansion joint in CMU at pool building roof mechanical room was found to contain asbestos.
11. Coating in wall speaker enclosure was found to contain asbestos.
12. Painted finish on CMU was found to contain asbestos. Additional sampling is recommended.
13. Hard lime green adhesive for Styrofoam panel at outside wall over gypsum was found to contain asbestos.
14. Adhesive holding Tectum roof deck ceiling at the gymnasium and pool buildings was assumed to contain asbestos.
15. Transite inside fume hoods was assumed to contain asbestos.
16. Transite panels at custodian storage room were assumed to contain asbestos.
17. Stage fire curtain was assumed to contain asbestos.
18. Chalkboard/tackboard glue was assumed to contain asbestos.
19. Underground sewer pipes were assumed to contain asbestos.
20. Dampproofing on exterior and foundation walls was assumed to contain asbestos. The demolition contractor will have to comply with new DEP regulations.
21. Thru-wall flashing was assumed to contain asbestos. The demolition contractor will have to comply with new DEP regulations.
22. All other suspect materials were found not to contain asbestos. Hidden ACM may be found during renovation and demolition activities.

**Polychlorinated Biphenyls (PCB's)-Electrical Equipment and Light Fixtures:**

**Observations and Conclusions**

Visual inspection of various equipments such as light fixtures, thermostats, exit signs and switches was performed for the presence of PCB's and mercury. Ballasts in light fixtures were assumed not to contain PCB's since there were labels indicating that "No PCB's" was found. Tubes in light fixtures, thermostats, signs and switches were assumed to contain mercury. It would be very costly to test those equipments and dismantling would be required to access. Therefore, the above mentioned equipments should be disposed in an EPA approved landfill as part of the demolition project.

**PCB's in Caulking:**

PCB's are manmade chemicals that were widely produced and distributed across the country from the 1950s to 1977 until the production of PCB's was banned by the US Environmental Protection Agency (EPA) law which became effective in 1978. PCB's are a class of chemicals made up of more than 200 different compounds. PCB's are non-flammable, stable, and good insulators so they were widely used in a variety of products including: electrical transformers and capacitors, cable and wire coverings, sealants and caulking, and household products such as television sets and fluorescent light fixtures. Because of their chemical properties, PCB's are not very soluble in water and they do not break down easily in the environment. PCB's also do not readily evaporate into air but tend to remain as solids or thick liquids. Even though PCB's have not been produced or used in the country for more than 30 years, they are still present in the environment in the air, soil, and water and in our

food. EPA requires that all construction waste including caulking be disposed as PCB's if PCB's level exceed 50 mg/kg (ppm). An abatement plan might also be required as part of renovations.

**Observations and Conclusions:**

Caulking was assumed to contain PCB's.

**Lead Based Paint (LBP):**

**Observations and Conclusions**

LBP was assumed to exit on painted surfaces. A school is not considered a regulated facility. All LBP activities performed, including waste disposal, should be in accordance with applicable Federal, State, or local laws, ordinances, codes or regulations governing evaluation and hazard reduction. In the event of discrepancies, the most protective requirements prevail. These requirements can be found in OSHA 29 CFR 1926-Construction Industry Standards, 29 CFR 1926.62-Construction Industry Lead Standards, 29 CFR 1910.1200-Hazards Communication, 40 CFR 261-EPA Regulations. According to OSHA, any amount of LBP triggers compliance.

**Airborne Mold:**

Airborne mold testing was performed utilizing Zefon International Incorporated's Air-O-Cell® sampling device following all manufacturer supplied recommended sampling procedures.

The Air-O-Cell® is a direct read total particulate air sampling device. It works using the inertial impaction principle similar to other spore trap devices. It is designed for the rapid collection and analysis of airborne particulate including bioaerosols. The particulate includes fibers (e.g. asbestos, fiberglass, cellulose, clothing fibers) opaque particles (e.g. fly ash, combustion particles, copy toner, oil droplets, paint), and bioaerosols (e.g. mold spores, pollen, insect parts, skin cell fragments).<sup>1</sup>

The method involves drawing a known quantity of air through a sterile sampling cassette. Subsequent to sampling, the cassette is sealed and transferred to a microbiology laboratory under chain of custody protocol for microscopic analysis. This method counts both viable and nonviable mold spores.

Outside sample was collected outside at rear of building.

**AIRBORNE MOLD and PARTICULATE**

Lab ID #	Location	Total Mold Counts/M <sup>3</sup>	Pollen	Insect Fragment	Hyphal Fragments
131700327-0001	Weight Room	20	ND	ND	ND
131700327-0002	Room 520	40	ND	ND	ND
131700327-0003	Registrar's Office	34	ND	ND	ND
131700327-0004	Cafeteria Storage	70	ND	ND	ND
131700327-0005	Classroom 130	60	ND	ND	ND
131700327-0006	Classroom 106	40	ND	ND	ND
131700327-0007	Classroom 139	60	ND	ND	ND
131700327-0008	Classroom 112	80	ND	ND	ND
131700327-0009	Classroom 115	80	ND	ND	ND
131700327-0010	Outside	90	ND	ND	ND

<sup>1</sup> Zefon International Inc. <www.zefon.com>

**AIRBORNE MOLD and PARTICULATE  
(Subjective Scales)**

Lab ID #	Location	Skin Fragment Density (SFD)	Fibrous Particulates (FP)	Total Background Particulate (TBP)
131700327-0001	Weight Room	2	2	2
131700327-0002	Room 520	2	2	2
131700327-0003	Registrar's Office	3	2	2
131700327-0004	Cafeteria Storage	2	2	2
131700327-0005	Classroom 130	2	3	2
131700327-0006	Classroom 106	3	2	2
131700327-0007	Classroom 139	2	1	2
131700327-0008	Classroom 112	2	1	2
131700327-0009	Classroom 115	2	1	2
131700327-0010	Outside	2	1	2

**Legend:**

ND - Not Detected

**Observations:**

There are currently no guidelines or standards promulgated by a government agency or widely recognized scientific organization for the interpretation of airborne mold spore levels. The most commonly employed tool used to assess if mold growth is occurring in a structure is to compare quantities and species of mold outdoors to indoor. If there were more mold indoor, and/or if species were present indoor which were not present outdoors, then growth is occurring and remediation is recommended.

Indoor airborne mold spore concentrations were lower than the outside sample. Based on comparisons with historical data from projects of similar type, building utilization, geographic location and season, the indoor airborne levels are considered low. Indoor mold spore counts in the winter are typically in the 500-2,500-spores/cubic meter range.

Pollen, insect fragments and Hyphal fragments were either not present or low in the samples. Hyphal fragment is a non-reproductive part of the mold.

Total background particulate on all samples was assessed as "2" on a scale of 1-5 where 1 is low and 5 is high. Skin fragment density on all samples was assessed as "2-3" on a scale of 1-4 where 1 is low and 4 is high. The total background levels are measured to determine airborne dust not related to airborne mold. Skin fragments are measured to determine proper housing cleaning.

**Mercury in Rubber Flooring:**

***Number of Samples Collected***

Two (2) bulk samples were collected from the following.

**Type and Location of Suspect Material**

1. Rubber flooring at the gymnasium
2. Rubber flooring at the wrestling room

**Sample Results**

<b>Type and Location of Suspect Material</b>	<b>Sample Result</b>
1. Rubber flooring at the gymnasium	37 mg/kg
2. Rubber flooring at the wrestling room	16 mg/kg

**Observations and Conclusions:**

Samples results indicated the presence of high level of mercury. Mercury was assumed to have leached into the concrete slab. Sampling would be required to determine extent of contamination/leaching.

**Radon:**

**Number of Samples Collected**

Ten (10) air samples were collected at the following locations:

**Location of Sample**

1. First floor room 521
2. First floor registrar office
3. First floor security
4. First floor cafeteria storage
5. First floor classroom 130
6. First floor classroom 106
7. First floor classroom 139
8. First floor classroom 112
9. First floor classroom 115
10. First floor classroom 127/124

**Location of Sample**

**Sample Result**

1. First floor room 521	<0.4 pCi/L
2. First floor registrar office	0.5 pCi/L
3. First floor security	0.7 pCi/L
4. First floor cafeteria storage	<0.4 pCi/L
5. First floor classroom 130	0.7 pCi/L
6. First floor classroom 106	0.6 pCi/L
7. First floor classroom 139	0.5 pCi/L
8. First floor classroom 112	0.5 pCi/L
9. First floor classroom 115	0.5 pCi/L
10. First floor classroom 127/124	0.7 pCi/L

**Observations and Conclusions:**

The measured radon concentrations of the samples were found to be much lower than the EPA guideline of 4 picoCuris of radon per liter of air (pCi/L). No further action is required.

**Creosol Flooring:**

**Observations and Conclusions**

Wood shops block flooring was assumed to contain Creosol. The wood flooring would have to properly removed and disposed.

**3.0 COST ESTIMATES:**

The cost includes removal and disposal of all accessible ACM, other hazardous material and an allowance for removal of inaccessible or hidden ACM that may be found during renovation or demolition project.

Location	Material	Approximate Quantity	Cost Estimate (\$)
Throughout	Linoleum Floor Covering	76,800 SF	192,000.00
	Interior Windows	125 Total	12,500.00
	Interior Doors with Windows	750 Total	75,000.00
	Interior Caulking on Doors	30,000 LF	90,000.00
	Sinks	92 Total	9,200.00
	Transite Fume Hoods	14 Total	14,000.00
	Interior Transite Panels	3,000 SF	15,000.00
	Speaker Boxes	100 Total	5,000.00
	Adhesive for Styrofoam Panels	15,000 SF	75,000.00
	Paint on CMU Walls	Unknown	600,000.00
	Miscellaneous Hazardous Materials	Unknown	50,000.00
	Miscellaneous Hidden ACM	Unknown	50,000.00
	Tubes in Light Fixtures	13,000 Total	100,000.00
	Blackboards	1,400 Total	140,000.00
Wood Shops	Wood Block Flooring	6,250 SF	62,500.00
Gymnasium	Rubber Flooring/Cement	26,400 SF	264,000.00
Wrestling/Weight Rooms	Rubber Flooring/Cement	2,900 SF	29,000.00
Ramp to Gymnasium	Rubber Matting/Cement	2,500 SF	25,000.00
Mechanical Rooms	Vertical Caulking	500 LF	5,000.00
Cafeteria Storage Room	Transite Panels	100 SF	1,000.00
Stage	Fire Curtain	1 Total	8,500.00
Gymnasium/Pool Building	Adhesive on Tectum Deck	40,000 SF	160,000.00
Pool Building Boiler Room	Duct Insulation	250 SF	12,500.00
Exterior	Old Windows	150 Total	30,000.00
	Transite Panels	120,000 SF	600,000.00
	Metal Panels	70 Total	7,000.00
	Doors	120 Total	12,000.00
	Transite Sewer Pipes	Unknown <sup>1</sup>	50,000.00
	Damproofing on Exterior/Foundation Walls	Unknown <sup>1</sup>	250,000.00
Estimated costs for NESHAP Inspection, Destructive and Testing Services			17,500.00
Estimated costs for Design, Construction Monitoring and Air Sampling Services			233,300.00
<b>TOTAL:</b>			<b>\$ 3,195,000.00</b>

<sup>1</sup>: Part of selective demolition/addition.

**4.0 DESCRIPTION OF SURVEY METHODS AND LABORATORY ANALYSES:**

**Asbestos:**

Asbestos samples were collected using a method that prevents fiber release. Homogeneous sample areas were determined by criteria outlined in EPA document 560/5-85-030a. Bulk material samples were analyzed using PLM and dispersion staining techniques with EPA method 600/M4-82-020.

**Airborne Mold:**

The samples were analyzed by an EPA approved laboratory EMSL, Woburn, MA.

**Mercury in Rubber Flooring:**

The bulk sample was analyzed in accordance with EPA method 7471B.

**Radon:**

Radon samples were analyzed by an EPA licensed laboratory AccuStar, Medway, MA.

Inspected By:



---

Leonard J. Busa  
Asbestos Inspector  
(AI-030673)

## 5.0 LIMITATIONS AND CONDITIONS:

This report has been completed based on visual and physical observations made and information available at the time of the site visits, as well as an interview with the Owner's representatives. This report is intended to be used as a summary of available information on existing conditions with conclusions based on a reasonable and knowledgeable review of evidence found in accordance with normally accepted industry standards, state and federal protocols, and within the scope and budget established by the client. Any additional data obtained by further review must be reviewed by UEC and the conclusions presented herein may be modified accordingly.

This report and attachments, prepared for the exclusive use of Owner for use in an environmental evaluation of the subject site, are an integral part of the inspections and opinions should not be formulated without reading the report in its entirety. No part of this report may be altered, used, copied or relied upon without prior written permission from UEC, except that this report may be conveyed in its entirety to parties associated with Owner for this subject study.



### Asbestos Identification Laboratory

165 New Boston St., Ste 227  
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781-932-9600

Web: [www.asbestosidentificationlab.com](http://www.asbestosidentificationlab.com)  
Email: [mikemanning@asbestosidentificationlab.com](mailto:mikemanning@asbestosidentificationlab.com)

Batch: 19657



February 10, 2017

Ammar Dieb  
Universal Environmental Consultants  
12 Brewster Road  
Framingham, MA 01702

**Project Number:**  
**Project Name:** Durfle HS, Fall River, MA

**Date Sampled:** 2017-02-03  
**Work Received:** 2017-02-06  
**Work Analyzed:** 2017-02-08

**Analysis Method:** BULK PLM ANALYSIS EPA/600/R-93/116

Dear Ammar Dieb,

Asbestos Identification Laboratory has completed the analysis of the samples from your office for the above referenced project .

The information and analysis contained in this report have been generated using the EPA /600/R-93/116 Method for the Determination of Asbestos in Bulk Building Materials. Materials or products that contain more than 1% of any kind or combination of asbestos are considered an asbestos containing building material as determined by the EPA. This Polarized Light Microscope (PLM) technique may be performed either by visual estimation or point counting. Point counting provides a determination of the area percentage of asbestos in a sample. If the asbestos is estimated to be less than 10% by visual estimation of friable material, the determination may be repeated using the point counting technique. The results of the point counting supersede visual PLM results. Results in this report only relate to the items tested. This report may not be used by the customer to claim product endorsement by NVLAP or any other U.S. Government Agency.

Laboratory results represent the analysis of samples as submitted by the customer. Information regarding sample location, description, area, volume, etc., was provided by the customer. Asbestos Identification Laboratory is not responsible for sample collection activities or analytical method limitations. Unless notified in writing to return samples, Asbestos Identification Laboratory discards customer samples after 30 days. Samples containing subsamples or layers will be analyzed separately when applicable. Reports are kept at Asbestos Identification Laboratory for three years. This report shall not be reproduced, except in full, without the written consent of Asbestos Identification Laboratory.

- NVLAP Lab Code: 200919-0
- Massachusetts Certification License: AA000208
- State of Connecticut, Department of Public Health Approved Environmental Laboratory Registration Number: PH-0142
- State of Maine, Department of Environmental Protection Asbestos Analytical Laboratory License Number: LB-0078(Bulk) LA-0087(Air)
- State of Rhode Island and Providence Plantations. Department of Health Certification: AAL-121
- State of Vermont, Department of Health Environmental Health License AL934461

Thank you Ammar Dieb for your business.

Michael Manning  
Owner/Director

February 10, 2017

Ammar Dieb  
Universal Environmental Consultants  
12 Brewster Road  
Framingham, MA 01702

**Project Number:**  
**Project Name:** Durfle HS, Fall River, MA

**Date Sampled:** 2017-02-03  
**Work Received:** 2017-02-06  
**Work Analyzed:** 2017-02-08

**Analysis Method:** BULK PLM ANALYSIS EPA/600/R-93/116

FieldID	Material	Location	Color	Non-Asbestos %	Asbestos %
LabID					
1	Tar & Gravel Roof	~ Ctr Auditorium @ Metal Deck	black	Cellulose 10 Non-Fibrous 90	None Detected
219663					
2	Tar & Gravel Roof	~ Ctr Auditorium @ Metal Deck	multi	Cellulose 10 Non-Fibrous 90	None Detected
219664					
3	Residue in Channel of Metal Deck	1st FL Roof Over 533	black	Non-Fibrous 100	None Detected
219665					
4	Coating on Concrete Deck	Over 85	black	Non-Fibrous 100	None Detected
219666					
5	Assoc Paper #4	Over 85	black	Fiberglass 10 Cellulose 65 Non-Fibrous 25	None Detected
219667					
6	Coating on Concrete Deck	Over 460	black	Non-Fibrous 100	Detected Chrysotile < 1
219668					
7	Coating on Concrete Deck	Over 433	black	Non-Fibrous 100	None Detected
219669					
8	Coating on Concrete Deck	Over 404	black	Non-Fibrous 100	None Detected
219670					
9	White Glazing for Type-II Windows	@ Roof Over 51-82	white	Non-Fibrous 100	None Detected
219671					
10	White GL for Type-II Wins	@ Roof Over 51-82	white	Non-Fibrous 100	None Detected
219672					
11	Fire Proofing (FP)	@ Rear of Cafe as Debris, Exterior	white	Cellulose 100	None Detected
219673					
12	(FP)	@ Rear of Cafe as Debris, Exterior	white	Cellulose 100	None Detected
219674					
13	(FP)	@ Rear of Cafe as Debris, Exterior	multi	Cellulose 95 Non-Fibrous 5	None Detected
219675					
14	(FP)	Main Entrance Covered Walk-Way, Exterior	multi	Cellulose 98 Non-Fibrous 2	None Detected
219676					

FieldID	Material	Location	Color	Non-Asbestos %	Asbestos %
LabID					
15	(FP)	Main Entrance Covered Walk-Way, Exterior	multi	Cellulose 98 Non-Fibrous 2	None Detected
219677					
16	Door Frame Caulk (Grey)	Main Entrance, Exterior	gray	Non-Fibrous 100	None Detected
219678					
17	Door Fr (Grey)	Door #5, Exterior	gray	Non-Fibrous 100	None Detected
219679					
18	Interior Door Fr (Brown) for Exterior Door	Rear Cafe SW Door, Exterior	gray	Non-Fibrous 100	None Detected
219680					
19	Interior Door Fr (Brown) for Exterior Door	Exit Door by 134 T, Exterior	gray	Non-Fibrous 100	None Detected
219681					
20	Plaster Over Exterior Window	Pool Bldg, Rear, Exterior	white	Non-Fibrous 100	None Detected
219682					
21	Transite Siding as Debris	By 373, Exterior	brown	Non-Fibrous 90	Detected Chrysotile 10
219683					
22	Transite Siding~ Gym	Gym	brown	Non-Fibrous 90	Detected Chrysotile 10
219684					
23	Grey Win Fr (New Win)	W Main Entrance	gray	Non-Fibrous 100	None Detected
219685					
24	Grey Win Fr (New Win)	By 147	gray	Non-Fibrous 100	None Detected
219686					
25	Window GL for Orig Win	W Main Entrance	gray	Non-Fibrous 80	Detected Chrysotile 20
219687					
26	Window GL for Orig Win	Door #25 Ass'y	gray	Non-Fibrous 100	None Detected
219688					
27	Soft Grey GL for New Win	Rear Registrar's- Supply (As Patch Material?)	gray	Non-Fibrous 100	None Detected
219689					
28	CP-I	Auditorium in Proj Booth	white	Non-Fibrous 100	None Detected
219690					
29	CP-I	Auditorium in Proj Booth	white	Non-Fibrous 100	None Detected
219691					
30	CP-I	Girl's Locker- Varsity	multi	Non-Fibrous 100	None Detected
219692					
31	CP-I	Girl's Locker by PE	white	Non-Fibrous 100	None Detected
219693					
32	CP-I	Girl's Locker @ Bathrms	multi	Hair 2 Non-Fibrous 98	None Detected
219694					

FieldID	Material	Location	Color	Non-Asbestos %	Asbestos %
LabID					
33	CP-I	Elect Rm by 515	multi	Hair Non-Fibrous 2 98	None Detected
219695					
34	CP-I	Cust Rm @ Hall to Shops	multi	Hair Non-Fibrous 2 98	None Detected
219696					
35	CP-I	Boy's Locker by Showers	multi	Hair Non-Fibrous 2 98	None Detected
219697					
36	Exposed Glue Daub on CMU Wall	Assumed Former Chalkboard/Tackboard	brown	Non-Fibrous 100	None Detected
219698					
37	Mastic for Wood Block Floor	Rm 55 Wood Shop	black	Cellulose Non-Fibrous 10 90	None Detected
219699					
38	Mastic in Cork Running Perimeter	Of Rm 55 Wood Block Floor	black	Cellulose Non-Fibrous 10 90	None Detected
219700					
39	Mastic for Wood Block Floor	Rm 56 Former Wood Shop	black	Cellulose Non-Fibrous 10 90	None Detected
219701					
40	Mastic in Cork Running Perimeter	Of Rm 56 Wood Block Floor	black	Cellulose Non-Fibrous 10 90	None Detected
219702					
41	Interior Door Frame Caulk	C'rm 115	tan	Non-Fibrous 90	<b>Detected Chrysotile 10</b>
219703					
42	In Door Fr	Rear of Stage- Work Room	tan	Non-Fibrous 90	<b>Detected Chrysotile 10</b>
219704					
43	In Door Fr	Catwalk Entrance	tan	Non-Fibrous 90	<b>Detected Chrysotile 10</b>
219705					
44	In Door Fr	Girl's Locker- Varsity Rm	tan	Non-Fibrous 90	<b>Detected Chrysotile 10</b>
219706					
45	In Door Fr	Elect Rm by 515	tan	Non-Fibrous 90	<b>Detected Chrysotile 10</b>
219707					
46	In Door Fr	Rm 520 (Former Nurse)	tan	Non-Fibrous 90	<b>Detected Chrysotile 10</b>
219708					
47	Glazing for Mesh Window in Metal Door	C'rm 124	tan	Non-Fibrous 95	<b>Detected Chrysotile 5</b>
219709					
48	GL for Mesh Win in Metal Door	C'rm 130	tan	Non-Fibrous 95	<b>Detected Chrysotile 5</b>
219710					
49	GL for Mesh Win in Metal Door	C'rm 302	gray	Non-Fibrous 98	<b>Detected Chrysotile 2</b>
219711					
50	Glazing for Interior Window	Rm 520	gray	Other Non-Fibrous 2 98	None Detected
219712					

FieldID	Material	Location	Color	Non-Asbestos %	Asbestos %
LabID					
51	Non-Suspect Pressed Wood Lab Table	311/312	brown	Cellulose 95 Non-Fibrous 5	None Detected
219713					
52	Non-Susp PW Lab Table	307	brown	Cellulose 95 Non-Fibrous 5	None Detected
219714					
53	Hard Brown Lab Counter Table	311/312 (Wollastonite?)	brown	Non-Fibrous 100	None Detected
219715					
54	Hd Br Lab Counter Table	302	brown	Non-Fibrous 100	None Detected
219716					
55	Hd Br Lab Counter Table	4th FL Science Rm, Unknown	brown	Non-Fibrous 100	None Detected
219717					
56	1x1 AT	Freshman Class Office	gray	Mineral Wool 20 Cellulose 70 Non-Fibrous 10	None Detected
219718					
57	1x1 AT	Wrestle Rm, Off Gym	gray	Mineral Wool 20 Cellulose 70 Non-Fibrous 10	None Detected
219719					
58	1x1 AT	IT Rm	multi	Mineral Wool 30 Cellulose 60 Non-Fibrous 10	None Detected
219720					
59	Resin Floor	Girl's Lockers	multi	Non-Fibrous 100	None Detected
219721					
60	Resin Floor	Rm 111	multi	Non-Fibrous 100	None Detected
219722					
61	Orange Lino	Hall by 62	multi	Non-Fibrous 60	Detected Chrysotile 40
219723					
62	Adhesive #61	Hall by 62	yellow	Non-Fibrous 100	None Detected
219724					
63	Lino-I (Greenish)	112- Storage	multi	Non-Fibrous 70	Detected Chrysotile 30
219725					
64	Lino-IA (Grey)	Cafe	multi	Non-Fibrous 97	Detected Chrysotile 3
219726					
65	Lino-IA	Cafe @ Rear	multi	Non-Fibrous 70	Detected Chrysotile 30
219727					
66	Lino-I	Registrar's	multi	Non-Fibrous 60	Detected Chrysotile 40
219728					
67	Lino-IAA (Grey)	PIC Wing	multi	Non-Fibrous 60	Detected Chrysotile 40
219729					
68	Lino-IAAA (Brown)	Boy's Lockers	multi	Non-Fibrous 60	Detected Chrysotile 40
219730					

FieldID	Material	Location	Color	Non-Asbestos %	Asbestos %
LabID					
69	Lino-II (Red Spots-New?)	C'rm 123	multi	Cellulose 40 Non-Fibrous 60	None Detected
219731					
70	E Off FG	146- Break Rm (CL)	gray	Mineral Wool 40 Non-Fibrous 60	None Detected
219732					
71	E Off FG	146- Break Rm (Valve)	gray	Mineral Wool 30 Cellulose 10 Non-Fibrous 60	None Detected
219733					
72	E Off FG	Cust Storage by 227	gray	Mineral Wool 35 Non-Fibrous 65	None Detected
219734					
73	Duct Insulation (DI)	Pool Bldg Bsmt Boiler Rm	multi	Mineral Wool 30 Non-Fibrous 60	Detected Chrysotile 10
219735					
74	DI	Pool Bldg Bsmt Boiler Rm	white	Synthetic 30 Non-Fibrous 70	None Detected
219736					
75	DI	Pool Bldg Bsmt Boiler Rm	white	Synthetic 20 Non-Fibrous 80	None Detected
219737					
76	Debris Beside Boiler	Assumed From Behind Metal Jacketing, Pool Bldg Bsmt Boiler Rm	gray	Mineral Wool 35 Non-Fibrous 65	None Detected
219738					
77	Debris Beside Boiler	Assumed From Behind Metal Jacketing, Pool Bldg Bsmt Boiler Rm	gray	Non-Fibrous 100	None Detected
219739					
78	Black Sink Damp Proofing	C'rm 130	black	Non-Fibrous 95	Detected Chrysotile 5
219740					
79	Black Sink DP	Rm 520	black	Non-Fibrous 97	Detected Chrysotile 3
219741					
80	Black Sink DP	346-Lounge	black	Non-Fibrous 95	Detected Chrysotile 5
219742					
81	Tape on Metal Duct	Pool Bldg Roof Mech Room	multi	Cellulose 40 Non-Fibrous 60	None Detected
219743					
82	Tape on Metal Duct	Pool Bldg Roof Mech Room	multi	Cellulose 45 Non-Fibrous 55	None Detected
219744					
83	Vert X-Joint in CMU	Pool Bldg Roof Mech Room	tan	Non-Fibrous 98	Detected Chrysotile 2
219745					
84	Assumed E Debris on Metal Duct	Gym Bldg Roof Mech Room	gray	Mineral Wool 30 Non-Fibrous 70	None Detected
219746					
85	Mud @ Flange End of FG PI	Gym Bldg Roof Mech Room	gray	Mineral Wool 25 Cellulose 5 Non-Fibrous 70	None Detected
219747					
86	Roof Drain E Off FG	Gym Bldg Roof Mech Room	gray	Mineral Wool 35 Non-Fibrous 65	None Detected
219748					

FieldID	Material	Location	Color	Non-Asbestos %	Asbestos %
LabID					
87	Adhesive for Fancy Gyp Wall	C'rm 363	tan	Non-Fibrous 100	None Detected
219749					
88	Adh for Fancy Gyp Wall	C'rm 362	tan	Non-Fibrous 100	None Detected
219750					
89	Joint Compound (JP)	C'rm 385	white	Non-Fibrous 100	None Detected
219751					
90	JC	C'rm 314	white	Non-Fibrous 100	None Detected
219752					
91	JC	C'rm 362	white	Non-Fibrous 100	None Detected
219753					
92	JC	Library	white	Non-Fibrous 100	None Detected
219754					
93	JC	Lobby @ Main Entrance	white	Non-Fibrous 100	None Detected
219755					
94	JC	Hall by 403	white	Non-Fibrous 100	None Detected
219756					
95	JC	Wood Shop- Right #56	white	Non-Fibrous 100	None Detected
219757					
96	Lino-IAAA Brown	Aud Entrance Vestibule	multi	Non-Fibrous 60	Detected Chrysotile 40
219758					
97	Int Win GL	Aud Entrance Vestibule	gray	Other 2 Non-Fibrous 98	None Detected
219759					
98	12" Red VT Plain	Pool Bldg Lobby	red	Non-Fibrous 100	None Detected
219760					
99	Adhesive #98	Pool Bldg Lobby	yellow	Non-Fibrous 100	None Detected
219761					
100	12" Black Trim Tile	Pool Bldg Lobby	black	Non-Fibrous 100	None Detected
219762					
101	12" Black Trim Tile	Main Lobby	black	Non-Fibrous 100	None Detected
219763					
102	12" Black Trim Tile	3rd FL W Main Lobby	black	Non-Fibrous 100	None Detected
219764					
103	12" Red VT (Spots)	Main Lobby	multi	Non-Fibrous 100	None Detected
219765					
104	12" Red VT (Spots)	Main Lobby	red	Non-Fibrous 100	None Detected
219766					

FieldID	Material	Location	Color	Non-Asbestos %	Asbestos %
LabID					
105	12" VT-I (Grey)	Hall Outside Performing Art Wing	white	Non-Fibrous 100	None Detected
219767					
106	Black M #105	Hall Outside Performing Art Wing	black	Non-Fibrous 100	None Detected
219768					
107	VT-I	Rm 520	white	Non-Fibrous 100	None Detected
219769					
108	Black M #107	Rm 520	black	Non-Fibrous 100	None Detected
219770					
109	12" VT-II (Creme)	2nd FL, Top of Main Stairs	tan	Non-Fibrous 100	None Detected
219771					
110	12" VT-III (White w/ Brown Spots)	Hall, 371 Wing	tan	Non-Fibrous 100	None Detected
219772					
111	VT-III	Lobby, 256 Wing	tan	Non-Fibrous 100	None Detected
219773					
112	Adhesive #111	Lobby, 256 Wing	multi	Cellulose 5 Non-Fibrous 95	None Detected
219774					
113	Coating in Wall Speaker Enclosure	Rm 77	black	Non-Fibrous 95	<b>Detected Chrysotile 5</b>
219775					
114	Black Mastic for Rubber Flooring	@ Ramp to Gym	black	Non-Fibrous 100	None Detected
219776					
115	Grey Win Fr	Cafe Window~ Exterior	gray	Non-Fibrous 100	None Detected
219777					
116	Rubber Floor	Gym	tan	Non-Fibrous 100	None Detected
219778					
117	VT-I	Hall to PIG Wing	white	Non-Fibrous 100	None Detected
219779					
118	BL M #117	Hall to PIG Wing	black	Cellulose 5 Non-Fibrous 95	None Detected
219780					
119	Painted Finish on CMU	Cafe Red-Black Concession Stand	multi	Non-Fibrous 100	None Detected
219781					
120	Painted Finish on CMU	Rm 106	white	Non-Fibrous 98	<b>Detected Chrysotile 2</b>
219782					
121	Carpet Glue	Library	yellow	Non-Fibrous 100	None Detected
219783					
122	Carpet Glue	2nd FL Main Office	yellow	Non-Fibrous 100	None Detected
219784					

FieldID	Material	Location	Color	Non-Asbestos %	Asbestos %
LabID					
123	Carpet Glue	261 Wing	yellow	Non-Fibrous 100	None Detected
219785					
124	VT-III	Hall by Rm 400	white	Non-Fibrous 100	None Detected
219786					
125	VT-IV (Older? Grey)	Rm 400~ Sophomore Office	tan	Non-Fibrous 100	None Detected
219787					
126	Tan Leveler? #125	Rm 400~ Sophomore Office	multi	Non-Fibrous 100	None Detected
219788					
127	VT-V Creme w/ Colors	(Library) TV Classroom	white	Non-Fibrous 100	None Detected
219789					
128	Hard Brown Lab Table Sink	(Library) TV Studio	brown	Non-Fibrous 100	None Detected
219790					
129	Thick Grey Caulk Between (Ext) Window & Conc Column	From Interior From Room 100	gray	Non-Fibrous 100	None Detected
219791					
130	Hard Lime Green Adhesive for Styrofoam Panel	Outside Wall, Over Gyp Room 100	gray	Non-Fibrous 95	Detected Chrysotile 5
219792					
131	JC as Skim	On Outside Wall, Hall Outside 2nd FL Cust Office	white	Non-Fibrous 100	None Detected
219793					
132	Hard Lime Green Adhesive	For Styrofoam Panel Over Gyp Wall	gray	Non-Fibrous 95	Detected Chrysotile 5
219794					

Friday 10 February

End of Report

Page 8 of 8

Analyzed by:



Batch: 19657

# CHAIN OF CUSTODY

samples #12 → #10  
ROOF SAMPLES

<b>Universal Environmental Consultants</b>
12 Brewster Road
Framingham, MA 01702
Tel: (508) 628-5486 - Fax: (508) 628-5488
adieb@uec-env.com

Town/City: FALL RIVER, MA Building Name: DURFEE H.S.

Sample	Result	Description of Material	Sample Location
1		Tar: Gravel roof	≈ CTR Auditorium & metal deck
2		Tar: Gravel roof	≈ CTR Auditorium & metal deck
3		residue in channel of metal deck	1 <sup>st</sup> FL ROOF OVER 53:
4		COATING ON CONCRETE DECK	OVER 85
5		ASSOC. PAPER # 4	OVER 85
6		COATING ON CONCRETE DECK	OVER 460
7		COATING ON CONCRETE DECK	OVER 433
8		COATING ON CONCRETE DECK	OVER 404
9		white glazing for type-II windows	& roof over 51-82
10		white gl. for type-II windows	& roof over 51-82
11		Fireproofing (FP)	& rear of CASE AS debris <u>EXTENSIVE</u>
12		(FP)	& rear of CASE AS debris
13		(FP)	& rear of CASE AS debris
14		(FP)	MAIN ENTRANCE COVERED WALK-WAY
15		(FP)	MAIN ENTRANCE COVERED WALK-WAY
16		Door frame caulk (grey)	MAINTENANCE
17		Door fc (grey)	Door # 5 (IT)
18		interior Door fc (brown) for exterior Door	rear CASE 5 W. door
19		interior Door fc (brown) for exterior Door	exit door by 134 (IT)
20		plaster over exterior window	Pool Bldg, rear

Reported By: Lawrence Bunn Date: 2/3/17 Due Date: 72-hr  
 Received By: Mr. Upd Date: 2/16/17

207

# CHAIN OF CUSTODY

<b>Universal Environmental Consultants</b>
12 Brewster Road
Framingham, MA 01702
Tel: (508) 628-5486 - Fax: (508) 628-5488
adieb@uec-env.com

Town/City: Fall River, MA Building Name: Durfee H.S.

Sample	Result	Description of Material	Sample Location
21		transite siding as debris	373 <sup>23</sup> <b>EXTERIOR</b>
22		transite siding ~ Gym	Gym
23		Grey win. for (new win)	W. main entrance
24		Grey win. for (new win)	by 147
25		windough for orig. win	W. main entrance
26		win. gl. for orig. win	Door #25 assy
27		soft grey gl. for new win	near Registrar's - supply <b>(AS PATCH MATERIAL?)</b>
28		CP-I	Auditorium in proj. bath
29		CP-I	Auditorium by proj. bath
30		CP-I	Girl's Locker - Varsity
31		CP-I	Girl's Locker by PE
32		CP-I	Girl's Locker & bathroom
33		CP-I	ELECT. rm by 515
34		CP-I	cust. rm @ hall to Shops
35		CP-I	Boy's Locker by showers
36		exposed glue dash on cove wall, assumed <sup>form</sup> chalkboard / tackboard	
37		mastic for wood block floor	rm 55 Woodshop
38		mastic in cork running perimeter at rm 55 wood block floor	
39		mastic for wood block floor	rm 56 <sup>Form</sup> woodshop
40		mastic in cork running perimeter at rm 56 wood block floor	

Reported By: Lena Berra Date: 2/3/17 Due Date: 72-hr

Received By: \_\_\_\_\_ Date: \_\_\_\_\_

307

# CHAIN OF CUSTODY

**Universal Environmental Consultants**  
12 Brewster Road  
Framingham, MA 01702  
Tel: (508) 628-5486 - Fax: (508) 628-5488  
adieb@uec-env.com

Town/City: Kill River, MA Building Name: Durfee H.S.

Sample	Result	Description of Material	Sample Location
41		interior door frame caulk	rm 116
42		INT. door fr	rear of stage - work room
43		INT. door fr	CATWALK ENTRANCE
44		INT. door fr	Girl's Locker - Varsity rm
45		INT. door fr	ELECTR. rm by 515
46		INT. door fr	rm 520 (Former Nurse)
47		glazing for mesh windows in metal door	rm 134
48		gl for mesh win in metal door	rm 130
49		gl for mesh win in metal door	rm 302
50		glazing for interior window	rm 520
51		NON-SUSPECT PRESSED WOOD LAB TABLE	311/312
52		NON-SUSP PW LAB TABLE	307
53		hard Brown LAB COUNTER TABLE	311/312 (Wollastonite?)
54		hd Br LAB COUNTER TABLE	302
55		hd Br LAB COUNTER TABLE	4th Fl Science rm, unknown
56		1x1 [AT]	reshawn Class Office
57		1x1 [AT]	Wright's Waste rm, off gym
58		1x1 [AT]	IT rm
59		Resin Floor	Girl's Lockers
60		Resin Floor	rm 111

Reported By: [Signature] Date: 2/3/17 Due Date: 72 hr

Received By: \_\_\_\_\_ Date: \_\_\_\_\_

407

# CHAIN OF CUSTODY

<b>Universal Environmental Consultants</b>
12 Brewster Road
Framingham, MA 01702
Tel: (508) 628-5486 - Fax: (508) 628-5488
adieb@uec-env.com

Town/City: Fall River, MA Building Name: DURFEE H.S.

Sample	Result	Description of Material	Sample Location
61		orange line	hall by 62
62		adhesive #61	" "
63		line - I (greenish)	112 - storage
64		line - I A (grey)	CAFE
65		line - I A	CAFE & MEAT
66		line - I	REGISTER'S
67		line - I A A (grey)	P.T.C. wing
68		line - I A A A (Brown)	Boy's lockers
69		line - II (red spots - NEW?)	rm 123
70		ⓔ OFF EQ	146 - Break rm (CL)
71		ⓔ OFF EQ	146 - Break rm (CL)
72		ⓔ OFF EQ	CUST. STORAGE by 227
73		Just insulation (DI)	Pool Bldg Bsmt Boiler rm
74		(DI)	T
75		(DI)	T
76		debris beside Boiler	assumed from behind metal jacketing
77		debris beside Boiler	" ↓ " " ↓ "
78		Black sink damp proofing	rm 130
79		" sink dp	rm 521
80		" sink dp	346 - lounge

Reported By: Leonard Berra Date: \_\_\_\_\_ Due Date: \_\_\_\_\_

Received By: \_\_\_\_\_ Date: \_\_\_\_\_

507

# CHAIN OF CUSTODY

**Universal Environmental Consultants**  
12 Brewster Road  
Framingham, MA 01702  
Tel: (508) 628-5486 - Fax: (508) 628-5488  
adie@uec-env.com

Town/City: Fall River, MA Building Name: Durfee H.S.

Sample	Result	Description of Material	Sample Location
81		Tape on metal duct	Pool Bldg roof mech room
82		Tape on metal duct	" " " "
83		VERT X-JOINT in CON	" " " "
84		assumed debris on metal duct	Gym Bldg roof mech room
85		mid c. Flange end of FG (PI)	" " "
86		roof drain @ REF FG	" " "
87		adhesive for FANG of gyp wall	rm 363
88		adh for FANG of gyp wall	rm 362
89		Joint Compound (JC)	rm 385
90		JC	rm 314
91		JC	rm 362
92		JC	Library
93		JC	LOBBY @ MAIN ENTRANCE
94		JC	hall by 403
95		JC	Woodshop - right #56
96		lin - 1AAA Brown	and ENTRANCE VESTIBULE
97		int. vinyl	and ENTRANCE VESTIBULE
98		12" red vt plain	Pool Bldg LOBBY
99		adhesive #98	" " "
100		12" Black Trim Tile	" " "

Reported By: [Signature] Date: 2-3-17

Due Date: 7-2-17

Received By: \_\_\_\_\_ Date: \_\_\_\_\_

609

# CHAIN OF CUSTODY

<b>Universal Environmental Consultants</b>
12 Brewster Road
Framingham, MA 01702
Tel: (508) 628-5486 - Fax: (508) 628-5488
adieb@uec-env.com

Town/City: Fall River, Ma Building Name: Judge H.S.

Sample	Result	Description of Material	Sample Location
101		12" Black Trim Tile	main lobby
102		12" Black Trim Tile	3 <sup>rd</sup> FL. w/ main lobby
103		12" red vt (spots)	main lobby
104		12" red vt (spots)	main lobby
105		12" vt-II (grey)	hall outside Performing Arts wing
106		Black (m) #105	" " " "
107		vt-II	rm 520
108		Black (m) #107	" "
109		12" vt-II (creme)	2 <sup>nd</sup> FL, Top of main stairs
110		12" vt-III (white w/ brown spots)	hall, 371 wing
111		vt-III	lobby, 256 wing
112		Adhesive #111	" " "
113		coating in wall speaker enclosure	rm 77
114		Black mastic for rubber flooring @ ramp to Gym	
115		grey win fr	cafe windows ~ exterior
116		rubber floor	Gym
117		vt-I	hall to PIC wing
118		BL (m) #117	" " "
119		Painted finish on cmv	cafe red-black concession stand
120		Painted finish on cmv	rm 106

Reported By: James R. Buser Date: 2/3/17 Due Date: 72 hr  
 Received By: \_\_\_\_\_ Date: \_\_\_\_\_

7-7

# CHAIN OF CUSTODY

**Universal Environmental Consultants**  
12 Brewster Road  
Framingham, MA 01702  
Tel: (508) 628-5486 - Fax: (508) 628-5488  
adieb@uec-env.com

Town/City: Fall River, ma Building Name: Durfee High School

Sample	Result	Description of Material	Sample Location
121		carpet glue	Library
122		carpet glue	2 <sup>nd</sup> FL. main OFFICE
123		carpet glue	2 <sup>nd</sup> FL. wiring
124		VT-III	hall by rm 400
125		VT-IV (older? grey)	rm 400 - Sophomore Office
126		Tan leather? #125	" " " "
127		VT-V: same w/ colors	(Library) T.V. classroom
128		hard Brown Lab Table <sup>sink</sup>	(Library) T.V. studio
129		thick grey caulk between (ext) window & conc. ceiling, from interior	100
130		lime green adhesive for styrofoam panel, outside wall, over gyp	room 100 OFFICE
131		UC AS skin	on outside wall, hall outside 2 <sup>nd</sup> FL. OFFICE
132		hard lime green adhesive for styrofoam panel over gyp wall	" " " "
133		" " "	on outside wall, 1 <sup>st</sup> FL. rm 100

Reported By: [Signature] Date: 2-3/17 Due Date: 7-2-17  
Received By: \_\_\_\_\_ Date: \_\_\_\_\_

OrderID: 131700327

131700327

# CHAIN OF CUSTODY

<b>Universal Environmental Consultants</b>
12 Brewster Road
Framingham, MA 01702
Tel: (508) 628-5486 - Fax: (508) 628-5488
adfeb@uec-env.com

Town/City: Fall River, MA Building Name: DURFEE High School

Sample	Result	Description of Material	Sample Location
		23561065	weight room
		23561127	rm 520
		23560878	REGISTRARS OFFICE & Gym hall
		22906044	CAFE STORAGE
		23560766	c'm 130
		23560793	c'm 106
		23560762	c'm 139
		23560767	c'm 112
		23561198	c'm 115 <u>outside Bldg</u>
		23560844	directly outside MAIN ENTRANCE
		all cassettes run (10m) (156pm) = 150L	

Reported By: [Signature] Date: 1/23/17

Received By: \_\_\_\_\_ Date: \_\_\_\_\_

Due Date: 48 hr

**RECEIVED**  
JAN 24 2017  
By: [Signature] 9:27  
807  
5217  
0186  
EmsL Fx



**EMSL Analytical, Inc.**

5 Constitution Way, Unit A Woburn, MA 01801  
Tel/Fax: (781) 933-8411 / (781) 933-8412  
<http://www.EMSL.com/bostonlab@emsl.com>

**EMSL Order:** 131700327  
**Customer ID:** UEC63  
**Customer PO:**  
**Project ID:**

**Attn:** Ammar Dieb  
Universal Environmental Consultants  
12 Brewster Road  
Framingham, MA 01702

**Phone:** (617) 984-9772  
**Fax:** (508) 628-5488  
**Collected:**  
**Received:** 01/24/2017  
**Analyzed:** 01/25/2017

**Project:** Durfee High School - Fall River, MA

**Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods EMSL 05-TP-003, ASTM D7391)**

Lab Sample Number:	131700327-0001			131700327-0002			131700327-0003		
Client Sample ID:	23561065			23561127			23560878		
Volume (L):	150			150			150		
Sample Location	Weight Room			Rm 520			Registrars Office @ Lino Hall		
Spore Types	Raw Count	Count/m <sup>3</sup>	% of Total	Raw Count	Count/m <sup>3</sup>	% of Total	Raw Count	Count/m <sup>3</sup>	% of Total
Alternaria	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	1*	7*	20.6
Aspergillus/Penicillium	-	-	-	-	-	-	-	-	-
Basidiospores	1	20	100	1	20	50	1	20	58.8
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	3*	20*	50	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	1*	7*	20.6
Pithomyces	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis	-	-	-	-	-	-	-	-	-
Stachybotrys	-	-	-	-	-	-	-	-	-
Torula	-	-	-	-	-	-	-	-	-
Ulocladium	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>1</b>	<b>20</b>	<b>100</b>	<b>4</b>	<b>40</b>	<b>100</b>	<b>3</b>	<b>34</b>	<b>100</b>
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	22	-	-	22	-	-	22	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	2	-	-	2	-	-	3	-
Fibrous Particulate (1-4)	-	2	-	-	2	-	-	2	-
Background (1-5)	-	2	-	-	2	-	-	2	-

Bipolaris++ = Bipolaris/Drechslera/Exserohilum  
Myxomycetes++ = Myxomycetes/Periconia/Smud

  
Steve Grise, Laboratory Manager  
or other approved signatory

No discernable field blank was submitted with this group of samples.

High levels of background particulate can obscure spores and other particulates leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "\*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA AIHA-LAP, LLC -EMLAP Accredited #180179

Initial report from: 01/25/2017 14:12:01

For information on the fungi listed in this report, please visit the Resources section at [www.emsl.com](http://www.emsl.com)



**EMSL Analytical, Inc.**

5 Constitution Way, Unit A Woburn, MA 01801  
Tel/Fax: (781) 933-8411 / (781) 933-8412  
<http://www.EMSL.com / bostonlab@emsl.com>

**EMSL Order:** 131700327  
**Customer ID:** UEC63  
**Customer PO:**  
**Project ID:**

**Attn:** Ammar Dieb  
Universal Environmental Consultants  
12 Brewster Road  
Framingham, MA 01702

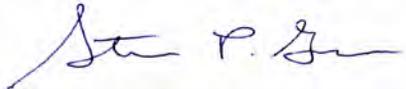
**Phone:** (617) 984-9772  
**Fax:** (508) 628-5488  
**Collected:**  
**Received:** 01/24/2017  
**Analyzed:** 01/25/2017

**Project:** Durfee High School - Fall River, MA

**Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods EMSL 05-TP-003, ASTM D7391)**

Lab Sample Number:	131700327-0004			131700327-0005			131700327-0006		
Client Sample ID:	22906044			23560766			23560793		
Volume (L):	150			150			150		
Sample Location	Café Storage			C'm 130			C'm 106		
Spore Types	Raw Count	Count/m <sup>3</sup>	% of Total	Raw Count	Count/m <sup>3</sup>	% of Total	Raw Count	Count/m <sup>3</sup>	% of Total
Alternaria	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	-	-	-	2	40	66.7	-	-	-
Basidiospores	3	70	100	1	20	33.3	2	40	100
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis	-	-	-	-	-	-	-	-	-
Stachybotrys	-	-	-	-	-	-	-	-	-
Torula	-	-	-	-	-	-	-	-	-
Ulocladium	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>3</b>	<b>70</b>	<b>100</b>	<b>3</b>	<b>60</b>	<b>100</b>	<b>2</b>	<b>40</b>	<b>100</b>
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	22	-	-	22	-	-	22	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	2	-	-	2	-	-	3	-
Fibrous Particulate (1-4)	-	2	-	-	3	-	-	2	-
Background (1-5)	-	2	-	-	2	-	-	2	-

Bipolaris++ = Bipolaris/Drechslera/Exserohilum  
Myxomycetes++ = Myxomycetes/Periconia/Smut

  
Steve Grise, Laboratory Manager  
or other approved signatory

No discernable field blank was submitted with this group of samples.

High levels of background particulate can obscure spores and other particulates leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. \*\*\* Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA AIHA-LAP, LLC --EMLAP Accredited #180179

Initial report from: 01/25/2017 14:12:01

For information on the fungi listed in this report, please visit the Resources section at [www.emsl.com](http://www.emsl.com)



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**EMSL Order:** 131700327  
**Customer ID:** UEC63  
**Customer PO:**  
**Project ID:**

**Attn:** Ammar Dieb  
Universal Environmental Consultants  
12 Brewster Road  
Framingham, MA 01702

**Phone:** (617) 984-9772  
**Fax:** (508) 628-5488  
**Collected:**  
**Received:** 01/24/2017  
**Analyzed:** 01/25/2017

**Project:** Durfee High School - Fall River, MA

**Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods EMSL 05-TP-003, ASTM D7391)**

Lab Sample Number:	131700327-0007			131700327-0008			131700327-0009		
Client Sample ID:	23560762			23560767			23561198		
Volume (L):	150			150			150		
Sample Location	C'rm 139			C'rm 112			C'rm 115		
Spore Types	Raw Count	Count/m <sup>3</sup>	% of Total	Raw Count	Count/m <sup>3</sup>	% of Total	Raw Count	Count/m <sup>3</sup>	% of Total
Alternaria	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	4*	30*	37.5
Aspergillus/Penicillium	1	20	33.3	-	-	-	1	20	25
Basidiospores	2	40	66.7	2	40	50	2*	10*	12.5
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	2	40	50	1	20	25
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis	-	-	-	-	-	-	-	-	-
Stachybotrys	-	-	-	-	-	-	-	-	-
Torula	-	-	-	-	-	-	-	-	-
Ulocladium	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>3</b>	<b>60</b>	<b>100</b>	<b>4</b>	<b>80</b>	<b>100</b>	<b>8</b>	<b>80</b>	<b>100</b>
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	22	-	-	22	-	-	22	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	2	-	-	2	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	2	-	-	2	-

Bipolaris++ = Bipolaris/Drechslera/Exserohilum  
Myxomycetes++ = Myxomycetes/Periconia/Smud

  
Steve Grise, Laboratory Manager  
or other approved signatory

No discernable field blank was submitted with this group of samples.

High levels of background particulate can obscure spores and other particulates leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "\*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA AIHA-LAP, LLC --EMLAP Accredited #180179

Initial report from: 01/25/2017 14:12:01

For information on the fungi listed in this report, please visit the Resources section at [www.emsl.com](http://www.emsl.com)



**EMSL Analytical, Inc.**

5 Constitution Way, Unit A Woburn, MA 01801  
Tel/Fax: (781) 933-8411 / (781) 933-8412  
<http://www.EMSL.com / bostonlab@emsl.com>

**EMSL Order:** 131700327  
**Customer ID:** UEC63  
**Customer PO:**  
**Project ID:**

**Attn:** Ammar Dieb  
Universal Environmental Consultants  
12 Brewster Road  
Framingham, MA 01702

**Phone:** (617) 984-9772  
**Fax:** (508) 628-5488  
**Collected:**  
**Received:** 01/24/2017  
**Analyzed:** 01/25/2017

**Project:** Durfee High School - Fall River, MA

**Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods EMSL 05-TP-003, ASTM D7391)**

Spore Types	Raw Count	Count/m <sup>3</sup>	% of Total
Lab Sample Number:	131700327-0010		
Client Sample ID:	23560844		
Volume (L):	150		
Sample Location	Directly Outside Main Entrance		
Alternaria	-	-	-
Ascospores	-	-	-
Aspergillus/Penicillium	-	-	-
Basidiospores	3	70	77.8
Bipolaris++	-	-	-
Chaetomium	-	-	-
Cladosporium	1	20	22.2
Curvularia	-	-	-
Epicoccum	-	-	-
Fusarium	-	-	-
Ganoderma	-	-	-
Myxomycetes++	-	-	-
Pithomyces	-	-	-
Rust	-	-	-
Scopulariopsis	-	-	-
Stachybotrys	-	-	-
Torula	-	-	-
Ulocladium	-	-	-
Unidentifiable Spores	-	-	-
Zygomycetes	-	-	-
<b>Total Fungi</b>	<b>4</b>	<b>90</b>	<b>100</b>
Hyphal Fragment	-	-	-
Insect Fragment	-	-	-
Pollen	-	-	-
Analyt. Sensitivity 600x	-	22	-
Analyt. Sensitivity 300x	-	7*	-
Skin Fragments (1-4)	-	2	-
Fibrous Particulate (1-4)	-	1	-
Background (1-5)	-	2	-

Bipolaris++ = Bipolaris/Drechslera/Exserohilum  
Myxomycetes++ = Myxomycetes/Periconia/Smut

Steve Grise, Laboratory Manager  
or other approved signatory

No discernable field blank was submitted with this group of samples.

High levels of background particulate can obscure spores and other particulates leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. \*\*\* Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA AIHA-LAP, LLC --EMLAP Accredited #180179

Initial report from: 01/25/2017 14:12:01

For information on the fungi listed in this report, please visit the Resources section at [www.emsl.com](http://www.emsl.com)



Radon in Air

NELAC NY 11769  
NRPP 101193 AL  
NRSB ARL0017

EPA Method #402-R-92-004  
Liquid Scintillation  
NRPP Device Code 8088  
NRSB Device Code 12193

Laboratory Report for:

Property Tested:

Universal Environmental Consultant  
12 Brewster Road  
Framingham MA 01702

Durfee High School  
Not Indicated 3297215 3297217  
Fall River MA

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result (pCi/L)
2035196	3297215	01/23/2017 10:45 am 01/25/2017 1:25 pm	First Floor Room 521	< 0.4
2035197	3297224	01/23/2017 10:50 am 01/25/2017 12:05 pm	First Floor Registrar Office	0.5
2035198	3297229	01/23/2017 10:54 am 01/25/2017 12:07 pm	First Floor Security	0.7
2035199	3297234	01/23/2017 11:00 am 01/25/2017 12:11 pm	First Floor Café Storage	< 0.4
2035200	3297226	01/23/2017 11:16 am 01/25/2017 1:45 pm	First Floor Crm 130 Green	0.7
2035201	3297240	01/23/2017 11:20 am 01/25/2017 1:40 pm	First Floor Crm 106	0.6
2035202	3297219	01/23/2017 11:24 am 01/25/2017 1:55 pm	First Floor Crm 139	0.5
2035203	3297218	01/23/2017 11:33 am 01/25/2017 1:30 pm	First Floor Crm 112	0.5
2035204	3263374	01/23/2017 11:40 am 01/25/2017 1:35 pm	First Floor Crm 115	0.5
2035205	3297217	01/23/2017 11:44 am 01/25/2017 1:59 pm	First Floor Crm 127 and 124	0.7

**Comment:** Universal Environmental Consultant was emailed a copy of this report.

Test Performed By: Leonard J Busa

Distributed by: Universal Environmental Consultant

Date Received: 01/26/2017 Date Logged: 01/26/2017 Date Analyzed: 01/27/2017 Date Reported: 01/27/2017

Report Reviewed By: Michelle Cleveland

Report Approved By: Carolyn D. Koke

**Disclaimer:**

Carolyn D. Koke, President, AccuStar Labs

The uncertainty of this radon measurement is +/- 10%. Factors contributing to uncertainty include statistical variations, daily and seasonal variations in radon concentrations, sample collection techniques and operation of the dwelling. Interference with test conditions may influence the test results.

This report may only be transferred to a third party in its entirety. Analytical results relate to the samples AS RECEIVED BY THE LABORATORY. Results shown on this report represent levels of radon gas measured between the dates shown in the room or area of the site identified above as "Property Tested". Incorrect information will affect results. The results may not be construed as either predictive or supportive of measurements conducted in any area of this structure at any other time. AccuStar Labs, its employees and agents are not responsible for the consequences of any action taken or not taken based upon the results reported or any verbal or written interpretation of the results.





**EMSL Analytical, Inc.**

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Attn: **Ammar Dieb**  
**Universal Environmental Consultants**  
**12 Brewster Road**  
**Framingham, MA 01702**

1/30/2017

Phone: (508) 628-5486  
Fax: (508) 628-5488

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 1/24/2017. The results are tabulated on the attached data pages for the following client designated project:

**Fall River, MA / Durfee High School**

The reference number for these samples is EMSL Order #011700627. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (856) 303-2500.

Approved By:

Phillip Worby, Chemistry Laboratory Manager



The test results contained within this report meet the requirements of NELAP and/or the specific certification program that is applicable, unless otherwise noted.  
NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, CA ELAP 187

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements established by the NELAP, unless specifically indicated. All results for soil samples are reported on a dry weight basis, unless otherwise noted. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.



**EMSL Analytical, Inc.**

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EMSL Order: 011700627  
 CustomerID: UEC63  
 CustomerPO:  
 ProjectID:

Attn: **Ammar Dieb**  
**Universal Environmental Consultants**  
**12 Brewster Road**  
**Framingham, MA 01702**

Phone: (508) 628-5486  
 Fax: (508) 628-5488  
 Received: 01/24/17 9:30 AM

Project: **Fall River, MA / Durfee High School**

**Analytical Results**

**Client Sample Description** 1 **Collected:** 1/23/2017 **Lab ID:** 0001  
 Gym

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
7471B	Mercury	37	2.4	mg/Kg	1/27/2017	CM	1/27/2017	CM

**Client Sample Description** 2 **Collected:** 1/23/2017 **Lab ID:** 0002  
 Wrestling Room

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
7471B	Mercury	16	2.1	mg/Kg	1/27/2017	CM	1/27/2017	CM

**Definitions:**

ND - indicates that the analyte was not detected at the reporting limit  
 RL - Reporting Limit (Analytical)

# SITE SELECTION MATRIX

## Site Development Requirements

	Cost of Property	Location in City	Buildable Area	Abutting Properties	Environmental Contamination	Zoning
<b>Existing HS</b>	✓ Being taken over by the city for back taxes	✓ To the south east of the city, but it is near another school.	✓ Total parcel – 63.86 acres Buildable: ~55 Riverfront area, wetland & buffer, zone C surface water protection Sufficient area for multiple buildout options including add/reno, new construction, & phased construction.	✓ Residential, woodland, other schools	✓	Single Family Residence
<b>Duro Mills</b>	✓ Being taken over by the city for back taxes	✓ To the south east of the city, but it is near another school.	✗ Total parcels - 16 acres Buildable: ~15 acres Separated by a street and other properties	✓ Residential Kuss Middle School Other industrial use	✗ 2 reported releases of No. 6 Fuel Oil Design & construction cost Use of site as textile mill increase chances of unknown contaminants	Industrial Park District Research and Development Overlay
<b>Fall River Industrial Park</b>	✗ Purchase from Greater Fall River Development Corp. Loss of revenue	✗ Northern edge of town Only accessible via two roads	✗ Total parcels - 68 acres (19 parcels) Largest contiguous - 22 acres Riverfront area, wetland & buffer, zone B & C surface water protection, potential vernal pool	✗ Industrial, landfill	✓ Releases on nearby properties, but not available properties	Waterfront and Transit Oriented Development (western lots) Commercial Mill District (East lot) Housing Development Overlay (SCHOOL WOULD NEED USE VARIANCE)
<b>Anawan Mill</b>	✗ Purchase N-12-0007 from Old Iron Works Realty Own N-12-0002 Loss of revenue	✗ Centrally located but surrounded by freeway and on and off ramps (195)	✗ Total parcels = 6.1 acres (2parcels) Largest contiguous – 4.6 acres FEMA Flood Zone 10ft setbacks, 80ft or 6 story bldg. height	✗ Business	✓	Waterfront and Transit Oriented Development (WDOD)



# SITE 1: EXISTING HIGH SCHOOL

## Site Development Requirements

B.M.C. Durfee High School consists of one building originally constructed in 1886 and the new building completed in 1978. The site is located at 360 Elsbree Street, Fall River, MA on 63.86± acres of land according to the City of Fall River ("City") Assessors Database (Parcel P-28-0001). The High School currently accommodates approximately 2,250 students. The site is accessible via four two-way driveways, one each off Elsbree Street, Chestnut Street, Hood Street, and Weetamoe Street. The site is furnished with school buildings, athletic facilities, parking facilities, and associated structures.

The site is bounded by residential properties and Langley Street to the north and Elsbree Street to the east. The Site is bound to the South by Stanley Street and the Spencer Borden School, which falls partially within the Site. The Spencer Borden School is an inventoried historical site on MACRIS and the Fall River Register of Significant Structures, but not on the national register. Based on pictures, the old building was demolished. The site is bound to the west by Chestnut Street, residential properties, and wooded wetlands behind James Tansey Elementary School.

### **Zoning Regulations**

According to the "Zoning Map of the City of Fall River" updated March, 1 2013, the Site is located in an area zoned Single-family residence district (S). Educational facilities are noted to be allowed within a zone S according to "the Revised Ordinances of the City of Fall River: Chapter 86" with Amendments through July, 2013. The

Zoning Ordinance indicates the following would control the development on this Site:

### S – Single-Family Residence District:

- 12,000 square feet minimum area
- 100 feet minimum lot frontage
- 25 feet minimum front yard setback
- 15 feet minimum side yard setback
- 25 feet minimum rear yard setback
- 35 feet maximum building height
- 25% maximum lot area coverage\*

\*defined as all impervious area

The parking capacity requirement for an educational facility are one (1) space for each employee per shift and one (1) loading space each building. The Institute for Transportation Engineers (ITE) develops a Parking Generation informational report provides data for estimated parking demand at various land uses. The 4th edition of the Parking Generation report suggests 0.23 vehicles per student for High Schools in Suburban Areas (Land Use 530).

### **Natural Environment**

**Topography:** The topography of the site generally pitches gradually downgradient from the west to the east. The highest elevations on site appear to be at the southwest corner of the property at elevation 235ft. The lowest elevation appears to be along the eastern property line along Elsbree Street at elevation 155ft. There are a number of steep slopes throughout the site. Record topographic maps (dated 1967) indicate that a low lying wetland area once existed on the east side of the site near Elsbree Street at the north east corner of the current building with the most recent topographic maps (dated 1979 and 85) indicating that this area has since been developed and mostly filled.

**Soils:** Existing soils were evaluated based on the USDA Natural Resource Conservation Services Web Soil Survey. Below is a description of the soils that are shown throughout the site as shown on the web soil survey (attached NRCS Soil Survey).

Within the parking lot areas and the athletic Fields on the north side of the site, the soil consist of Udorthents, smoothed rated Type A (Map Unit 651). This map unit consists of excessively drained sands and gravelly sands.

Within the footprint of the school and surrounding walks, drives, and parking lots, the soils consist of unrated urban land (Map Unit 602). This map unit consists of areas where 85 percent or more of the land is covered with impervious surfaces, such as buildings, pavement, etc.

Within the parking lot to the southwest of the site, the soils consist of Paxton fine sandy loam rated type C (Map Units 307B and C). These map units consist of areas with well drained, although extremely stony soil. The depth to the water table is approximately 18-37-inches

Based on the web soil survey information it is anticipated that the soils along the south and west side of the existing building may limit infiltration for stormwater due to their slow permeability and the depth to seasonal high groundwater in regards to future development. However, infiltration may be possible in the soils on the northeast side of the site. Stormwater infiltration practices may be considered in this area. Stormwater detention will likely be considered elsewhere on site.

For purposes of stormwater infiltration, we would recommend additional future test pits along the north and east side of the existing building (closer to Elsbree Street) which would provide soil information necessary to confirm if infiltration could be provided in those areas.

For purposes of investigating the subsurface conditions under the stadium, pavement, and athletic field footprints, a preliminary site specific soil boring and test pit investigation program has been completed by McArdle Gannon Associates, Inc. (MGA). Geotechnical explorations confirmed the subsurface is made up of several layers. In order from the surface down, these layers include the following: organic topsoil, a bouldery fill layer, followed by a layer of natural glacial till soils, then bedrock ranging from a depth of 2.5± to 17± feet beneath the surface. Groundwater was measured between elevations 148± and 166±. Please refer to the "Subsurface Conditions Summary Letter, Durfee High School Athletic Complex, Fall River, MA" prepared by MGA, Inc. and dated December 1, 2005 for more information.

For purposes of building foundations and future site improvements, we would recommend additional site specific soil boring and test pit investigation program.

**Wetlands:** After review of the Massachusetts GIS data layers (MassGIS) it does appear that there are wetlands located in the northeast and northwest corners of the site in undisturbed wooded areas. If determined to be jurisdictional wetlands, these areas will have a minimum 100-foot regulatory buffer zone. There is an unnamed stream running through the wetland at the northeast

corner of the site. This stream is protected as an Outstanding Resource Water (314 CMR 4.05(3)(a)) and has a 200-foot regulatory buffer. Additionally, the site is largely within the Zone C Surface Water Supply Protection Area and therefore stormwater is required to be treated and attenuated prior to discharge. Both the wetland and the stream do not prohibit proposed work, however will require a permit and request for determination through the Conservation Commission.

After review of the MassGIS layers, the Site does not appear to have any Critical Resources including Aquifers or potential or certified vernal pools as defined by the Natural Heritage and Endangered Species Program (NHESP). If it is determined in an environmental review that a vernal pool exists on the site the local regulations require a 100-foot No-Disturbance Zone around the upland area edge or the wetland area edge that encompasses the vernal pool.

According to the Flood Insurance Rate Maps available through FEMA (Federal Emergency Management Agency), this Site is located entirely outside of the 0.2% annual chance flood (Figure 4). There are no restrictions for development.

#### **Rare Species & Cultural Resources:**

Information regarding rare species was obtained from the MassGIS Rare Species and Priority Habitat data layer showing data recorded by the NHESP in the State Registry. Review of this information indicates that there are no known significant habitat areas within the Site.

#### **Infrastructure**

**Roadways and Parking Lots:** The site is accessible via four two-way driveways, one each off Elsbree Street, Chestnut Street, Hood Street, and Weetamoe Street. All adjacent streets are under

the city's jurisdiction and therefore will require only local approval for future modifications.

The site is furnished with the existing school buildings, paved parking areas, driveways and pedestrian walks, athletic facilities, and associated structures. The existing paved parking and drives are in poor condition with deep surface cracks, pot holes, low points, and pavement patches throughout. Future development and parking options could look to Elsbree Street, President Avenue (Route 6), and Ray Street, Hood Street, and Weetamoe Street as potential entrance/exit locations for vehicles. We would recommend a traffic impact analysis to further assess existing traffic patterns, existing roadways, and the future development.

Future development design considerations will likely require vehicular travel lanes surrounding the perimeter of the school to assist in access as well as provide emergency routes to each face of the school building. We would also recommend the re-paving of the existing parking areas and driveways if it is intended to re-use them with the future development.

**Utilities:** The existing conditions utility information was collected through site visits, communications with the Engineering Department, and the Water Department. Future development options would require that the existing utilities be located and included in design plans.

**Sewer:** A record plan for the Fall River High School titled "Site Utilities Plan" by "Hallwell Engineering Associates, Designers, and Consultants" dated May 4, 1973 was available at the City to review. Sanitary waste from the building is conveyed via gravity sewer line to two discharge locations in Elsbree Street.

There are two primary service lines, one each on the north and south sides of the building. The line that services the north side of the building is a 12-inch line flowing east. The line that services the south side of the building is a 10-inch line flowing east.

There is an approximately 20-foot section of 4-inch sewer force main which services the south side of building one and discharges to the south service line. There are two 4-inch acid resistant service pipes which discharge to the south service line. Plans we obtained do not indicate the presence of an existing exterior grease trap.

A record As-Built titled "Elsbree Street Plan and Profile of Sewer" by "Whitman & Howard Inc." dated December 1965 was available at the City to review. The record drawing shows the sewer main in Elsbree Street is an 8-inch vitrified clay pipe flowing north from President's Avenue to Hood Street and a 12-inch vitrified clay pipe flowing south from Langley Street to Hood Street. The 12-inch high school sewer service ties into the main in Elsbree Street north of Hood Street. The 10-inch high school sewer service ties into the main in Elsbree Street south of Hood Street. At manhole 102, at Hood Street, the two flows combine into a 15-inch vitrified clay pipe flowing east to a sewer pump station.

During design, the capacity of the existing sewer line will need to be evaluated to determine if it can handle the increased use or the need to provide an additional connection to the sewer main in Elsbree Street. Future development would require PVC sewer services and the installation of an exterior grease trap to service cafeteria functions.

**Water:** A record plan for the Fall River High School titled "Site Utilities Plan" by "Hallwell Engineering Associates, Designers, and Consultants" dated May 4, 1973 was available at the City to review. Water mains are located in Elsbree Street, Weetamoe Street, and Hood Street. There is an 8-inch water main in Weetamoe Street which cuts across the north side of the site and ties into the 20-inch main in Elsbree Street. There is a 20-inch water main in Hood Street which cuts across the south side of the site and ties into the 20-inch main in Elsbree Street. The drawings do not call out the pipe material on-site, or in Elsbree Street, Weetamoe Street, or Hood Street. Fire hydrants are located on Elsbree Street as well as one onsite.

Six onsite hydrants are distributed throughout the site on all sides of the building. Three hydrants are serviced from the 8-inch Weetamoe Street main and the other three are serviced from the 20-inch Hood Street main. The water main for this hydrant is serviced via the Balch Street water main.

The drawings show two 10-inch water services to building one off the Hood Street line; three 6-inch water services to building

two off the Hood Street line, two 4-inch, three 6-inch, and one 8-inch water services to building two off the Weetamoe line; three 6-inch, and one 4-inch water services to building three off the Hood Street line; and one 4-inch water services to building two off the Weetamoe line.

Information as to the existence, design, and location of an infiltration system in the athletic fields is unknown. We would recommend that record plans of the existing irrigation system and its components be provided if future development plans include the use of this system.

During design, a hydrant flow test will be required to determine available flow for fire suppression system design. Additionally, the need to relocate the existing service may need to be evaluated as well as the installation of an additional service for fire suppression. If future developments plans include partial building demolition, the service could be evaluated to see if connecting and maintaining a portion of the existing line would be feasible. However, it is likely that it would require replacement.

**Drainage:** A record plan for the Fall River High School titled "Site Utilities Plan" by "Hallwell Engineering Associates, Designers, and Consultants" dated May 4, 1973 was available at the City to review. The record drawings show a 30" drainage culvert located in Elsbree Street. The drawings do not call out the pipe material on-site or in Elsbree Street. The onsite drainage system appears to consist mainly of conveyance via a closed drainage system. Additionally, the onsite closed drainage system appears to act as a conveyance system for stormwater being captured upstream towards Stanley Street, Ray Street, and Spruce Street.

The Stanley and Ray Street drain line appears to enter the site from the southwest in the parking lot. Similarly, the Spruce Street drain line appears to enter the site from the north. The pipes are cut off with an infinity symbol which is not identified in the Legend. Site drainage is tied into both lines. The spruce Street drain line is routed through the north of the site. The point of discharge is not shown. The Stanley and Ray Street drain line is routed through the south of the site. There is one point of discharge for the drainage system located in Elsbree Street at the northeast corner of the site. Stormwater ultimately discharges east to the Watuppa Pond Basin.

On-site drainage is collected from impervious and pervious surfaces via catch basins and conveyed via a closed drainage system to the discharge point. It appears that the stormwater system is receiving little treatment in regards to TSS removal. During design, it should be evaluated if the current drainage pattern should be maintained or rerouted. This would also include review of an existing conditions plan that will be provided by a

surveyor in a later phase of this project. The existing on-site drainage system should be evaluated for integrity and for re-use in future development conditions.

The existing drainage pattern which conveys stormwater from Stanley Street, Ray Street, and Spruce Street, as described above, will be required to be maintained in future development conditions. This will need to be considered during the design process.

The future development drainage design will need to be re-designed to meet the Massachusetts Department of Environmental Protection stormwater standards, the City of Fall River Stormwater and Construction Site Management Ordinance and will require quantity and quality mitigation measures.

**Gas:** Liberty Utilities is the supplier of natural gas to the City of Fall River. There are four connections, one to each of the buildings schematically routed around the north side of the site. The gas is metered individually at each building. Future development options would require that the existing system be located and analyzed for capacity. Coordination should occur with Liberty Utilities regarding any service improvements.

**Electric:** National Grid is the supplier of electricity to the City of Fall River. Electricity is not shown on record drawings. Future development options would require that the existing system be located and analyzed for capacity. Coordination should occur with National Grid regarding any service improvements.

### **Summary**

The existing school site is suitable for development for a number of reasons. The buildable area on the existing

school site provides adequate space for a variety of development options including renovation, addition to the existing building, and new build scenarios. In a new build scenario, there is likely sufficient buildable space for the construction of a new building while maintaining all or portions of the existing school building, depending on the new building layout. The site is also located at a central location in the City which is surrounded primarily by residential development which provides a higher ease of access for a building users.

There are not constraints which prohibit this site from serving as a viable location for a newly constructed school or an expansion of the existing Durfee High School. Design considerations should include infiltration practices for stormwater treatment and attenuation which are consistent with onsite soils and water supply protection zone requirements. Development should include recognition of the wetland resource areas and consideration for their buffer zones in regards to development. We would recommend these considerations be made part of future development options. However, we do not believe there are any constraints which preclude this site from being a viable candidate for future school development.





BMC DURFEE HIGH SCHOOL  
360 ELSBREE STREET  
FALL RIVER, MASSACHUSETTS

AERIAL PLAN

JANUARY 2017

FIGURE 2

# EXISTING CONDITIONS BMC DURFEE HIGH SCHOOL

360 ELSBREE STREET  
FALL RIVER, MA. 02720  
PARE PROPOSAL No. CQ409.16 OCTOBER 2016

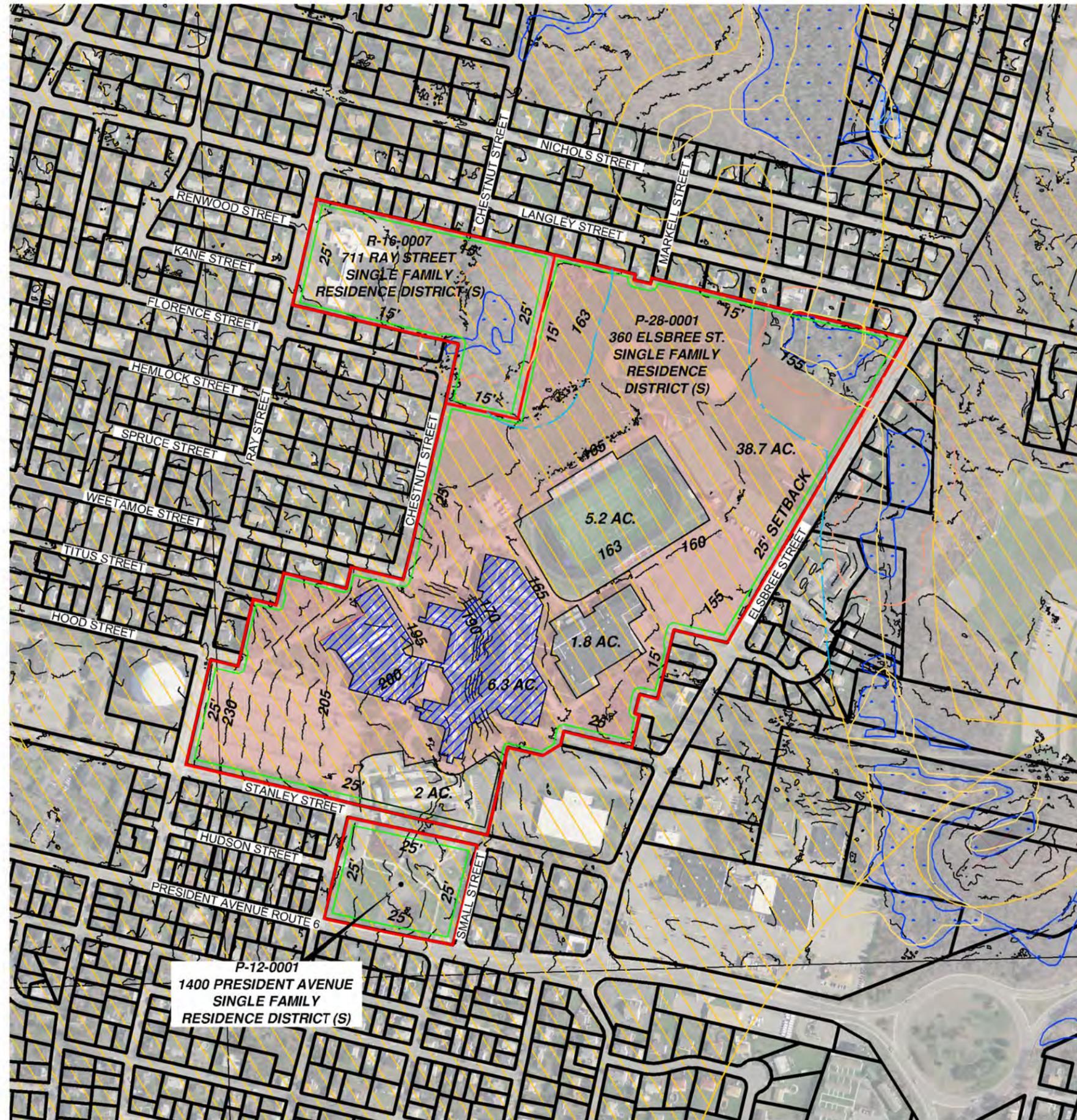


## LEGEND

-  PROPERTY LIMIT
-  BUILDING SETBACKS
-  ABUTTING PROPERTIES
-  DEP WETLANDS
-  100-FOOT WETLAND BUFFER
-  200-FOOT RIVERBANK BUFFER
-  SURFACE WATER SUPPLY PROTECTION AREAS
-  BUILDABLE AREA
-  BUILDABLE AREA EXISTING BUILDING

## NOTE:

TOTAL AREA OF PROPERTY LIMIT IS 76.91± ACRES  
(INCLUDES P-12-0001, P-28-0001 AND R-16-0007)



400' 200' 0 400'



Scale: 1"=400'



**PARE**  
PARE CORPORATION  
ENGINEERS - SCIENTISTS - PLANNERS  
10 LINCOLN ROAD, SUITE 210  
FOXBORO, MA 02035  
508-543-1755



**BMC DURFEE HIGH SCHOOL**  
 360 ELSBREE STREET  
 FALL RIVER, MASSACHUSETTS

**LOCUS PLAN**

JANUARY 2017

FIGURE 1