

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

Renée D. Coleman-Mitchell, MPH
Commissioner



Ned Lamont
Governor
Susan Bysiewicz
Lt. Governor

Environmental Health Section

March 3, 2020

Ms. Meredith Febbraio
Project Manager
Tighe and Bond, Inc.
1000 Bridgeport Ave, Suite 320
Shelton, CT 06484-4673

RE: Approval to Perform Asbestos Abatement (Revised)
**Stamford High School, 55 Strawberry Hill Avenue, Stamford, CT
Corridor 242A**

Dear Ms. Febbraio:

This letter is provided in response to an Application to perform Asbestos Abatement While School is In Session (hereafter "Application"). This Application was received by the State of Connecticut Department of Public Health (hereafter the "Department") from Tighe & Bond on or about February 28, 2020. The Application requested approval from the Department to allow the removal of asbestos containing materials (hereafter "ACM") during a period when the school is fully occupied with children. The ACM to be abated includes the removal of approximately 1,300 square feet of ceiling plaster. The location of this material is detailed in your Application. Your request was made in accordance with the provisions of Section 19a-333-7 of the Regulations of Connecticut State Agencies (hereafter "RCSA").

Based upon a review of your revised Application approval is conditionally granted by the Department to conduct this asbestos abatement activity while the school is fully occupied with children.

This asbestos abatement project shall begin no sooner than March 9, 2020 and shall be completed by March 31, 2020. Unless otherwise authorized, all abatement activities shall take place during second shift hours, between 3:30 PM and 11:30 PM. This approval is granted by the Department with the following additional conditions:



Phone: (860) 509-7365
Telecommunications Relay Service 7-1-1
410 Capitol Avenue, P.O. Box 340308
Hartford, Connecticut 06134-0308
www.ct.gov/dph

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- 1) This project shall be subject to full-time oversight by a Department certified Project Monitor (hereafter "Monitor"). No work shall be performed on this project unless the Monitor is physically on site.
- 2) At no time during the performance of this asbestos abatement work shall school age children be allowed in the portion of the school where the asbestos abatement project is being performed.
- 3) Corridor 242A shall be fully isolated from the remainder of the occupied school using fixed barrier walls, locked doors, and polyethylene barriers as detailed in your application.
- 4) The approval for the location and material fire rating for the fixed barriers to be installed to isolate the Work Area shall be received separately from the City of Stamford Building and Fire Officials and are expressly not part of this Application approval.
- 5) For the duration of this project, any portion of the building ventilation system within the Work Area shall be de-energized and physically isolated in an airtight manner from the remainder of the facility HVAC system.
- 6) Steps 2 and 5 above shall be accomplished prior to beginning Step 7 below.
- 7) Within Corridor 242A the Contractor shall, using polyethylene sheeting, then construct the contained asbestos work area up to the underside of ceiling tile grid, in full accordance with Section 5 of the RCSA. The Monitor shall then inspect the integrity of the contained work area and verify in his/her logs the completion of this pre-abatement inspection.
- 8) In full accordance with the RCSA, the ceiling tiles in the Work Area shall then be removed by the Contractor and discarded as asbestos waste. For any applicable Work Area boundary wall, the Contractor shall then, prior to disturbing any other materials, carefully remove enough plaster and metal lath from the plaster ceiling to allow a critical barrier and wall polyethylene to be firmly attached to the upper concrete ceiling, thereby fully sealing the subject work area air-tight. The Monitor shall then inspect the integrity of the contained work area and verify in his/her logs the completion of this inspection.
- 9) The next phase of work shall be the removal by the Contractor, in full accordance with the RCSA, of ceiling plaster around the sprinkler system anchors. Once this work has been completed the Work Area shall be visually inspected and air tested by the Monitor in full accordance with Section 19a-332a-12 of the RCSA.

- 10) After the reoccupancy air sampling standards in accordance with Section 19a-332a-12 of the RCSA have been met, the mechanical contractor shall then be allowed access to the Work Area in order to re-anchor the sprinkler system to the newly exposed substrate.
- 11) The final phase of asbestos abatement work by the Contractor shall then be performed and consist of, in full accordance with the RCSA, the abatement of all remaining asbestos containing materials in the Work Area.
- 12) Air samples collected by the Monitor during this project shall be analyzed by a Department certified environmental laboratory (hereafter "Laboratory"). Sample analyses shall be available by 8:00 A.M. on the day following the date of sample collection. Additionally, an electronic copy of air sample analyses shall be forwarded to the Department (stephen.dahlem@ct.gov) as soon as they are analyzed.
- 13) If, at any time during this asbestos abatement project, fiber concentrations in the vicinity of the regulated asbestos work area exceed 0.010 fibers per cubic centimeter (hereafter "f/cc") using Phase Contrast Microscopy (hereafter "PCM") analysis, work on this project shall stop and the Department shall be notified. The Monitor shall investigate and report the cause of the elevated fiber concentration to the Department.
- 14) *Any air sample analyzed by PCM that is overloaded with particulate, or any sample analysis that exceeds 0.010 f/cc, shall be further analyzed by the Laboratory using the NIOSH 7402 Transmission Electron Microscopy (hereafter "TEM") Method. Results of the NIOSH 7402 TEM sample analyses shall be submitted to the Department and the Stamford School District by 12:00 P.M. the day following collection.*
- 15) If the air samples further analyzed by the Laboratory using NIOSH 7402 TEM methods are determined to have fiber concentrations that are less than or equal to 0.010 asbestos fibers per cubic centimeter (af/cc), abatement work may recommence following verbal approval from the Department.
- 16) If any air sample further analyzed by the Laboratory using NIOSH 7402 TEM methods is either overloaded with particulate and cannot be analyzed or, if the sample fiber concentration exceeds 0.010 af/cc, the sampled area shall be considered contaminated with asbestos. The boundaries of the contaminated area shall be determined by a Department licensed Project Designer. The contaminated area shall be fully isolated in an airtight manner from the remainder of the school. The Project Designer shall submit to the Department a written assessment of the cause of the incident, and a list of remedial actions. The Department shall issue a written approval before the affected area may be occupied and the asbestos abatement project may be resumed.

- 17) At the completion of this project, the Monitor shall provide the Department with a copy of the results of the visual inspections performed, as well as the analysis of air sampling conducted, to determine the completion of this asbestos abatement project.

Where conflicts may exist between this document and any other document submitted as part of the Request, this document shall take precedence. Additionally, this approval by the Department to perform asbestos abatement while school is in session does not relieve the Asbestos Contractor or the facility owner from satisfying the requirements of all applicable federal, state and municipal regulations. The Department reserves the right to rescind this approval if any of the conditions of this approval are violated, or should the Department determine that equivalent means of asbestos emission control are not being maintained.

Please contact me at 860.509.7365 should you have any questions regarding this approval.

Sincerely,



Stephen P. Dahlem
Supervising Environmental Analyst
Asbestos Program
Environmental Health Section

February 28, 2020

Mr. Stephen Dahlem
Supervising Environmental Analyst
State of Connecticut
Department of Public Health - Asbestos Program
410 Capitol Avenue, MS #51 AIR
P.O. Box 340308
Hartford, Connecticut 06134-0308

Re: Permission to Perform Asbestos Abatement Activities
Full Student/Children Occupancy
Stamford High School
55 Strawberry Hill Avenue, Stamford, Connecticut

Dear Mr. Dahlem:

On behalf of our client, the City of Stamford Public Schools, Tighe & Bond, Inc. (Tighe & Bond) is submitting this request for permission to conduct asbestos abatement during full student/children occupancy at the above referenced facility.

Asbestos abatement to be conducted during full student/children occupancy is scheduled to start on Monday, March 9, 2020, and be completed by Tuesday, March 31, 2020. The asbestos abatement to be performed during full student/children occupancy includes the removal of approximately 1,300 square feet of ceiling plaster in corridor 242A.

Limited bulk sampling of suspect Asbestos-Containing Materials (ACM) anticipated to be disturbed by the project was performed by Kevin McCarthy and Bob Hobbins, both State of Connecticut licensed Asbestos Consultant – Inspectors. See Appendix A for a copy of the Laboratory Analytical Report and Chain-of-Custody Form. Additionally, existing bulk sampling results were reviewed by Mr. McCarthy along with the Asbestos Hazard Emergency Response Act (AHERA) reports in developing the scope of removal for the project. The Project Work Plan was created by Meredith Febbraio, a licensed Asbestos Consultant – Project Designer (license #000351). The abatement contractor is A.A.I.S Corporation of West Haven, Connecticut. (license #000017).

The school has informed Tighe & Bond the school will be fully occupied during the abatement project by regular school activities, however all abatement activities will take place during second shift, approximately 3:30 pm – 11:30 pm.

Building occupants will be isolated from the asbestos abatement via hard barriers constructed on the second floor in the corridor outside custodial closet 243B and the corridor outside closet 241C. Signs indicating children under the age of 18 shall not be permitted past the locked doors will be posted. Please see Appendix B for a diagram of the building for abatement work areas and hard barrier locations.

Asbestos Abatement

Interior work will be performed in accordance with all State and Federal regulations and shall include removal of the ACM as asbestos waste. The work will be split into several phases.

The first phase will start with the negative pressure containment being fully constructed up to the ceiling tile grid. The ceiling tiles in the corridor will then be removed and discarded as ACM contaminated due to the poor condition of the plaster ceiling located above and the possibility of ACM debris falling on top of the ceiling tiles. The containment



will then be extended up to the ACM ceiling plaster. The abatement contractor will carefully remove a strip of ceiling plaster and metal lath along the corridor boundary wall to allow a critical barrier and wall plasticization to reach to the upper concrete ceiling deck. Once the ceiling tiles have been removed, the area will be cleared via air sampling. Based on AHERA clearance criteria, Phase Contrast Microscopy (PCM) will be utilized if amount of damaged ceiling plaster above ceiling tiles is less than (<) 160 SF, and Transmission Electron Microscopy (TEM) will be utilized if amount is greater than or equal to (\geq) 160 SF.

The second phase of work will be the spot removal of ceiling plaster around the sprinkler anchors which are currently anchored to the ACM ceiling plaster. Once these areas are abated, the second work phase will be cleared using Transmission Electron Microscopy (TEM) re-occupancy air sampling based on AHERA clearance criteria of greater than or equal to (\geq) 160 SF of materials scheduled for abatement.

The plumber will then be allowed access to the cleared work area in order to re-anchor the sprinkler system to the newly exposed substrate. The third phase of work will consist of the abatement of all remaining ceiling plaster. This work phase will be cleared using Transmission Electron Microscopy (TEM) re-occupancy air sampling based on AHERA clearance criteria of greater than or equal to (\geq) 160 SF of materials scheduled for abatement.

All phases of abatement work will have a contiguous worker decontamination unit attached to the negative pressure containment constructed of two layers of four-mil polyethylene sheeting on walls not scheduled for demolition, two layers of six-mil polyethylene sheeting on floors, and six-mil polyethylene sheeting critical barriers. The Roof Top Unit (RTU) Air Handler Units (AHUs) servicing the work areas will be shut down and locked out/tagged out (LOTO) prior to start of asbestos abatement. Additionally, all hard barriers will be visually inspected for penetration and penetrations will be sealed air/smoke tight.

Decontamination unit water and work area water will be obtained from the sinks located in the custodial closets near the work areas. Work area power will be obtained from power panel connected to the electrical panels in the supply rooms in the same general areas.

The waste generated during asbestos abatement will be properly bagged, labeled, and transported to the properly signed and lined dumpsters located in the asphalt black top area located in the building's rear loading dock.

Project Monitoring Activities

All asbestos abatement activities will have full-time project monitoring services provided by a Tighe & Bond project monitor(s) licensed by the State of Connecticut Department of Public Health (CTDPH).

The project monitor will check worker paperwork and set up monitoring air samples as the first task of the day. The project monitor and abatement supervisor will be regularly checking the engineering controls throughout the day. The project monitor will be changing and reading air samples throughout the day.

Background Phase Contrast Microscopy (PCM) ambient air samples were collected on February 17, 2020, in the corridor and classrooms where asbestos abatement is occurring. Results of the background air samples are provided in Appendix C.

Tighe & Bond intends to use the background air sample results as an action level for comparison to samples collected during abatement. If airborne fiber concentrations during abatement exceed the background levels, Tighe & Bond will investigate the possible reason why the air samples exceeded the ambient background levels.



During abatement, air sampling will be performed at the entrance to the decontamination units, within the areas outside the work areas, and within the negative air exhaust tube. Copies of the Phase Contrast Microscopy (PCM) air sampling sheets will be provided to CTDPH representatives daily via e-mail.

If the airborne fiber concentrations during abatement ever exceed 0.010 f/cc the job will be shut down (if necessary) and the samples sent in for National Institute for Occupational Safety and Health (NIOSH) 7402 TEM analysis. The affected areas will be wet wiped, High Efficiency Particulate Air (HEPA) vacuumed, decontaminated, etc. and work will not be allowed to begin until any possible breaches have been corrected. If the NIOSH 7402 TEM analysis identifies asbestos fibers above 0.005 fibers/cubic centimeter (f/cc) the CTDPH will be notified within six hours of the results.

Tighe & Bond will collect approximately 6-10 background/ambient PCM air samples per day during abatement activities. Additional air samples may be collected based on the monitor's professional judgment.

Tighe & Bond will monitor exposure levels and verify adherence to the project work plan during the performance of abatement activities. If problems arise, Tighe & Bond's Project Monitor will notify the City of Stamford Public Schools, who will have the authority to stop the abatement work at any time it is determined that conditions are not within the specification, or that a health hazard might exist for other employees or building occupants, or that the potential exists for contamination of the environment.

Contingency Plan for Elevated Fiber Levels

Air sampling will be performed during every work shift as described above. Air samples may be collected to address and evaluate water leaks, power failures, and the failure of negative air pressure inside containment. The following will be implemented for contingency related sampling:

- 1) The daily air sampling results, during partial occupancy, will also be forwarded to the Owner for their records.
- 2) If any air sample exceeds background levels or 0.01 f/cc the sample will be analyzed by the NIOSH 7402 TEM method. The CTDPH will be notified by the project monitor if the sample fiber concentration exceeds 0.005 f/cc.
- 3) If the TEM air sample results confirm contamination of occupied areas of the building, the following action plan will be set in motion by the Superintendent:
 - a. Building occupants will be notified of the area that is to be closed.
 - b. The affected portion of the building will remain closed and all construction and abatement work will remain stopped until written decontamination procedures (from project designer) have been completed by the abatement contractor and written permission to resume occupancy has been received from CTDPH.
 - c. The project monitor will provide daily briefings on the progress of the decontamination procedures and air testing.
 - d. The affected areas of the building will not be re-occupied and the abatement work will not resume until written authorization has been given by the CTDPH.



Contingency Plan for Water Leaks and Power Failure/HEPA Filtration Unit Shutdown

Water Leaks

Abatement personnel, custodians, and building occupants will be instructed to report any signs of water leaks in occupied areas immediately to the building owner.

The project monitor and abatement contractor will immediately investigate to determine the source and extent of the water leak.

All abatement activities will be stopped immediately should the water leak be occurring in the interior of the building adjacent to the work area. The following will be initiated if a water leak is discovered:

- 1) Stop work, check containment integrity and reseal floor/wall penetrations and reseal polyethylene sheeting in the area of the leak. Abatement work will not resume until the project monitor is satisfied the source of the water leak has been repaired and the cleanup of the water has been completed.
- 2) Should a visible puddle of water be detected then the Owner will be contacted immediately. The CTDPH will be contacted within one hour or as soon as possible after leak is discovered.
- 3) The abatement contractor will stop work, check containment integrity and reseal floor wall penetrations and reseal polyethylene sheeting in the area of the leak. Abatement work will not resume until the project monitor has determined a written response action to address the potentially contaminated surfaces, the abatement contractor has cleaned up the affected area, and the monitor is satisfied the response action is complete.
- 4) Air samples will be completed for PCM analysis in the area of the response action. Abatement work will not resume until the project monitor is satisfied that the source of the leak has been repaired and the air results meet the criteria previously described.

Power Failure/HEPA Filtration Unit Shutdown

The following will occur should the containment's power fail and/or the HEPA filtration unit's shutdown:

- 1) All abatement work shall stop immediately and will not restart until the power problem is corrected and the filtration units are working.
- 2) If the problem is expected to exceed one hour the project monitor will notify the Owner and CTDPH. All personnel shall vacate the work area and the decontamination facility shall be sealed airtight.
- 3) Abatement work will be resumed only after the project monitor is satisfied the problem has been fixed (and probably won't reoccur) and the power and negative air machines are operational.
- 4) Air sampling will be performed in the area affected per the criteria previously described.

Attached in Appendix D please find a copy of the notification to parents, teachers, building occupants, and other employee organizations that will be sent out by the school prior to the commencement of abatement activities. Also, attached as Appendix E is a letter from



the school representative requesting permission to perform asbestos abatement activities during full student/children occupancy.

We look forward to your approval on this request. Should you have any questions, please feel free to contact me at (203) 712-1140.

Sincerely,



Meredith Febbraio
Project Manager

Enclosure:

- Appendix A Asbestos Laboratory Results and Chain of Custody Forms
- Appendix B Site Plan Figure Depicting Abatement Work Areas
- Appendix C PCM Background Air Sampling Results
- Appendix D Building Occupant Notification
- Appendix E Facilities Manager Request Letter to Conduct Asbestos Abatement During Full Occupancy



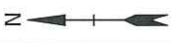
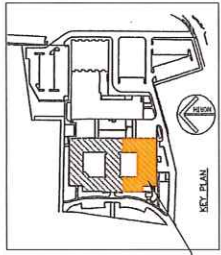
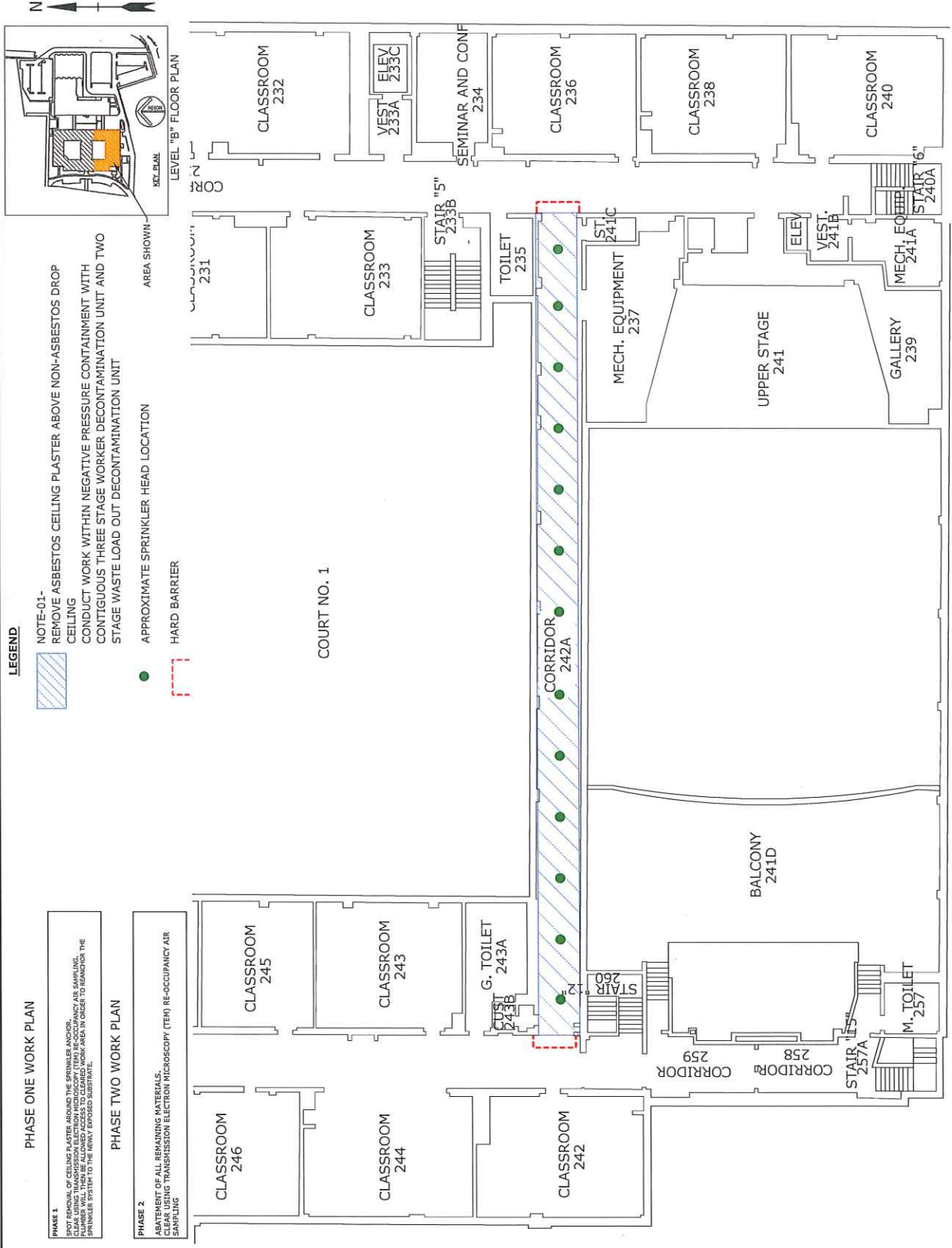
Tighe&Bond

APPENDIX A

Tighe&Bond

APPENDIX B

NO.	DATE	DESCRIPTION
1	01/17/2020	ISSUED FOR PERMITS
2	01/21/2020	ISSUED FOR PERMITS
3	01/21/2020	ISSUED FOR PERMITS
4	01/21/2020	ISSUED FOR PERMITS
5	01/21/2020	ISSUED FOR PERMITS
6	01/21/2020	ISSUED FOR PERMITS
7	01/21/2020	ISSUED FOR PERMITS
8	01/21/2020	ISSUED FOR PERMITS
9	01/21/2020	ISSUED FOR PERMITS
10	01/21/2020	ISSUED FOR PERMITS
11	01/21/2020	ISSUED FOR PERMITS
12	01/21/2020	ISSUED FOR PERMITS
13	01/21/2020	ISSUED FOR PERMITS
14	01/21/2020	ISSUED FOR PERMITS
15	01/21/2020	ISSUED FOR PERMITS
16	01/21/2020	ISSUED FOR PERMITS
17	01/21/2020	ISSUED FOR PERMITS
18	01/21/2020	ISSUED FOR PERMITS
19	01/21/2020	ISSUED FOR PERMITS
20	01/21/2020	ISSUED FOR PERMITS



PHASE 1

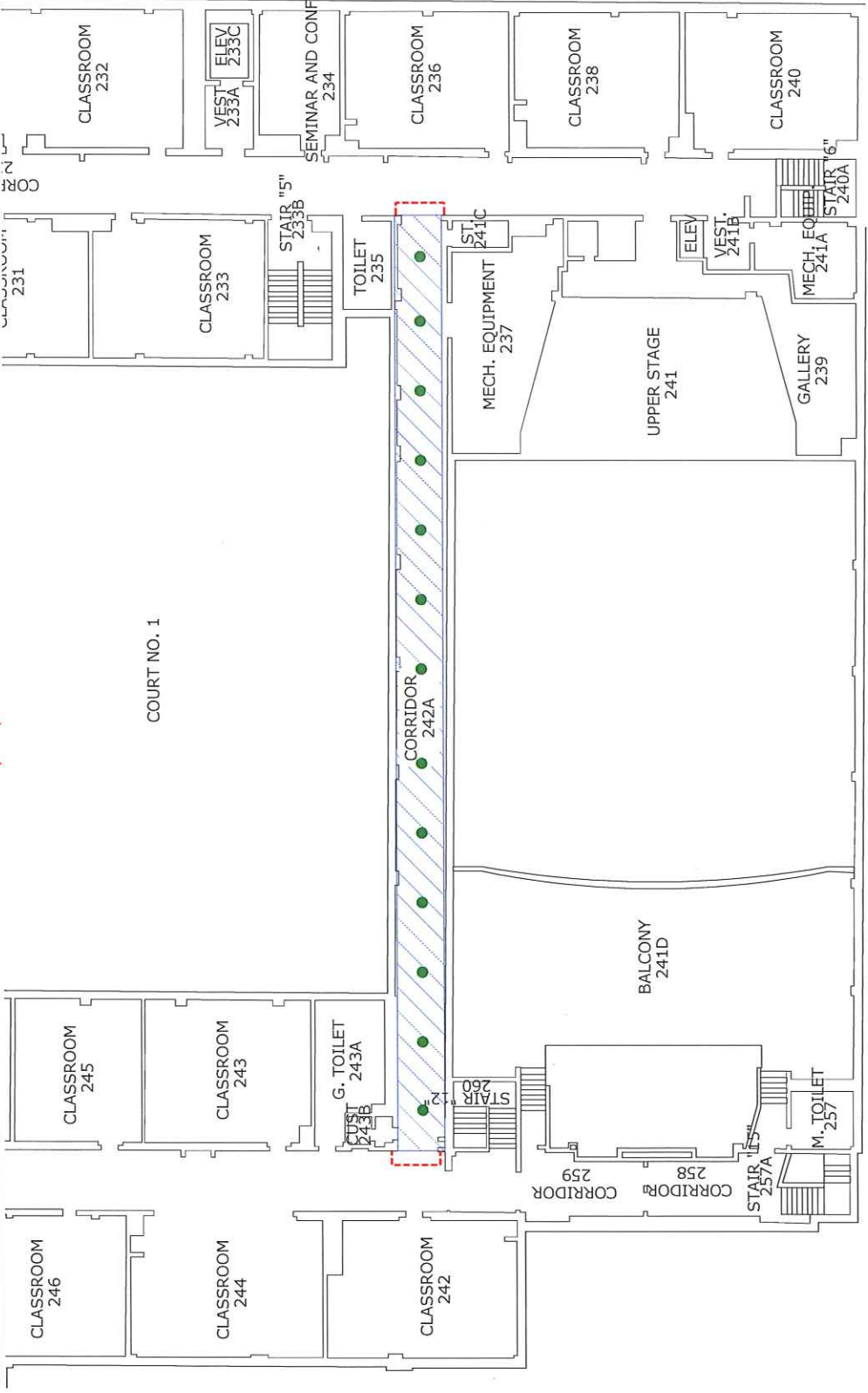
SPOT REMOVAL OF CEILING PLASTER AROUND THE SPRINKLER ANCHOR.
CLEAR USING TRANSMISSION ELECTRON MICROSCOPY (TEM) RE-OCCUPANCY AIR SAMPLING.
SPRINKLER SYSTEM TO THE NEWLY FINISHED SUBSTRATE.

PHASE 2

ABATEMENT OF ALL REMAINING MATERIALS.
CLEAR USING TRANSMISSION ELECTRON MICROSCOPY (TEM) RE-OCCUPANCY AIR SAMPLING

PHASE ONE WORK PLAN

PHASE TWO WORK PLAN



Tighe&Bond

APPENDIX C

PHASE CONTRAST MICROSCOPY AREA AIR SAMPLING DATA SHEET

Tighe & Bond

Project Number: 28-2087-0330 Date: 2/17/20
 Project Name: Stanford-Mold Task Force - SHS
 Contractor: _____ License Number: _____
 Project Monitor: Randy Taylor Project Monitor License Number: 743
 Scope of Work: Background AICS for Section 2

Sample ID Number	Sample Location	Project Activity	Sample Time		Sample Duration (Min)	Flow Rate (L/min)			Total Volume (L)	Filter Count (A17/A18)	Concentration (spores/L)
			On	Off		On	Off	Avg			
021720RT-10	Field Blank	Background	—	—	—	—	—	—	—	0/100	<0.002
-11	Sealed Blank		—	—	—	—	—	—	—	0/100	<0.002
-12	Hall at Room 136		1106	1311	155	10.0	10.0	10.0	1550	13/100	0.0042
-13	Hall at Room 236		1107	1342	155	10.0	10.0	10.0	1550	12/100	0.0039
-14	Hall at Room 242		1108	1343	155	10.0	10.0	10.0	1550	15/100	0.0049
-15	Auditorium Foyer		1109	1344	155	10.0	10.0	10.0	1550	7/100	0.0022
-12	Duplicate		—	—	—	—	—	—	1550	14/100	0.0045

Samples Collected By: Randy Taylor Date: 2/17/20 Time: _____
 Samples Analyzed By: Randy Taylor Date: 2/17/20 Time: _____
 Analyst AAR Number: 9450
 Lab Drop-Off Lab Name: _____ Turnaround Time: _____ Special Instructions: _____
 Samples Relinquished By: _____ Date/Time: _____ Samples Received By: _____ Date/Time: _____
 Results Reviewed By: _____

213 Court Street • Middletown, CT 06457 • Tel 860.704.4760 • Fax 860.704.4775

X
11775

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APPENDIX D

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APPENDIX E