

# **PROJECT MANUAL**

**Area Cooperative Educational Services**

**CONNECTICUT**

## **RESCUE WINDOW INSTALLATION**

**at**

**88 Bassett Road**

**North Haven, Connecticut 06473**

**S/P+A PROJECT NO. 19.126**



**Issued for Bid: March 3, 2020**



**Architects/Engineers/Interior Designers**

**Silver/Petrucci + Associates, Inc.**

**3190 Whitney Avenue, Hamden, Connecticut 06518**

**One Post Hill Place, New London, Connecticut 06320**





RESCUE WINDOW INSTALLATION

**88 BASSETT ROAD  
NORTH HAVEN, CT 06473**

S/P+A PROJECT NO. 19.126

<u>DIVISION 00 – PROCUREMENT AND CONTRACT REQUIREMENTS</u>	<u>PAGES</u>
Invitation to Bid	1
Instructions to Bidders	12
Bid Form	3
Standard Form of Agreement Between Owner and Contractor for a Project of Limited Scope (AIA A107)	26
Exhibit A – Contractors Insurance Requirements	2
Exhibit B – Scope of Work	2
Exhibit C – ACES School Calendar	2
Drawing List	1
 <u>DIVISION 01 – GENERAL REQUIREMENTS</u>	
Section 011000 Summary of Work	3
Section 012500 Substitution Procedures	4
Section 012600 Contract Modification Procedures	2
Section 012900 Payment Procedures	5
Section 013100 Project Management and Coordination	4
Section 013300 Submittal Procedures	7
Section 014000 Quality Requirements	6
Section 014200 References	3
Section 014500 Project Requirements	5
Section 016000 Product Requirements	5
Section 017310 Cutting and Patching	4
Section 017400 Warranties and Bonds	2
Section 017700 Closeout Procedures	5
 <u>DIVISION 02 – EXISTING CONDITIONS</u>	
Section 024119 Selective Demolition	6
Asbestos Hazard Emergency Response Act Initial Asbestos Inspection and Management Plan, August 2019	273
 <u>DIVISION 06 – WOOD, PLASTICS AND COMPOSITES</u>	
Section 061000 Rough Carpentry	5
 <u>DIVISION 07 – THERMAL AND MOISTURE PROTECTION</u>	
Section 079200 Joint Sealants	7

## TABLE OF CONTENTS

---

### DIVISION 08 – OPENINGS

Section 084313	Aluminum-Framed Storefronts	9
Section 088000	Glazing	12

### DIVISION 10 – SPECIALTIES

Section 101400	Signage	3
----------------	---------	---

END OF TABLE OF CONTENTS

## INVITATION TO BID

March 10, 2020

Attention: Bidders  
Regarding: Rescue Window Installation at 88 Bassett Road

Dear Bidders:

Enclosed please find Bid Documents for **RESCUE WINDOW INSTALLATION at 88 BASSETT ROAD**, ACES Wintergreen Magnet School located in North Haven, Connecticut.

A pre-bid conference for Bidders will be held on **March 18, 2020 at 3:00 p.m.** in the school located at 88 Bassett Road, North Haven.

**One (1) original and three (3) copies of your Bid Submission is required to be submitted, on the enclosed forms to ACES Administration Building, Attn: Timothy Gunn, Director of Facilities & Construction, 350 State Street, North Haven, CT 06473 on April 2, 2020 by 2:00 p.m.**

The envelope is to be labeled: **88 Bassett Rescue Window Installation – Sealed Bid Enclosed.**

Accordingly, we have included in the Bid Package: Project Manual, inclusive of a sample Contract, Exhibits A, B, and C and Specifications, and Drawings for bidding purposes.

Bidders may obtain Bidding Documents at ACES website: <https://www.aces.org/our-agency/request-for-proposals/open-rfps/>. It is the bidder's responsibility to review and obtain complete sets of the Bidding Documents in preparing their Bids. **Each bidder is responsible for checking the website to determine if any addenda have been issued.**

Please note that the blanks you must fill in on the Proposal Form and the accompanying Exhibits are on the following pages. **(Only these listed pages need to be returned as part of your Bid Submission):**

Bid Form	All
Statement of Bidder's Qualifications	All
Affirmative Action Policy Statement	One
Non-Collusion Affidavit of Bidder	One
Acceptance of Contract Terms	One
Exhibit B – Scope of Work	Signature Page

ACES reserves the right to reject any and all Bid Submissions, to waive any formality, technicality, or irregularity in any Bid Submission.

If you should have any questions concerning this Project, please feel free to contact David Stein of Silver/Petrucelli at 203-230-9007 ext. 201, email: [dstein@silverpetrucelli.com](mailto:dstein@silverpetrucelli.com).

In closing, we thank you in advance for your Bid Submission.

Very truly yours,  
**ACES**

*Tim Gunn*

Timothy Gunn  
Director of Facilities and Construction

cc: Bid File



1.1 DEFINITIONS

- A. Bidding Documents include the Bidding Requirements and the Contract Documents.
- B. The Bidding Requirements consist of:
  - 1. The Invitation to Bid
  - 2. The Instructions to Bidders
  - 3. The Bid Form
  - 4. ACES Contract, including Exhibits A “Contractors Insurance Requirements”, Exhibit B “Scope of Work” and Exhibit C “ACES School Calendars”.
  - 5. Asbestos Hazardous Emergency Response Act Initial Asbestos Inspection and Management plan
- C. The Contract Documents consist of:
  - 1. The form of Agreement will be a **modified A107-2007 between the Owner and Contractor for a Project of Limited Scope.**
  - 2. Drawings.
  - 3. Specifications.
  - 4. Addenda issued prior to execution of the Contract.
- D. Owner is the Area Cooperative Education Services (ACES).
  - 1. Owner’s Designated Representative is Timothy Gunn.
- E. Architect is Silver/Petrucelli + Associates, Inc.
- F. Addenda are written or graphic instruments issued by the Architect prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.
- G. A Bid is the complete and properly signed proposal to do the Work for the sums stipulated therein. A bid is considered complete if it is submitted according to the terms of the Bidding Documents.
- H. The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base, to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids.
- I. An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.
- J. A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment or services for a portion of the Work identified in the Bidding Documents.
- K. A Bidder is a person or entity who submits a Bid.
- L. A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment and/or labor for a portion of the Work.
- M. The Successful Bidder is the Bidder to whom the Owner (ACES) makes an award.

- N. Definitions established in the Contract Documents are applicable to the Bidding Documents.

1.2 BIDDER'S REPRESENTATIONS

- A. By making a Bid, the Bidder represents that:

1. The Bidder has carefully examined the Bidding Documents, the requirements are clear, and concurs with them. The Bid is made in full agreement with those requirements.
2. The Bidder understands the requirements of the Bidding Documents to the extent that such documentation relates to the Work for which the Bid is submitted, for other portions of the Project, if any, being bid concurrently or presently under construction.
3. The Bidder and appropriate Sub-bidders have visited the site, have become familiar with local conditions under which the Work is to be performed and have correlated the Bidder's personal observations with the requirements of the Bidding Documents.
4. The Bid is based upon the materials, equipment and systems required by the Bidding Documents without exception or qualification.
5. The Bidder has not colluded with any other person in regard to any Bid or sub-bid submitted.

1.3 BIDDING DOCUMENTS

- A. Documents are available only in complete sets. Bidders may obtain Bidding Documents at the ACES website: <http://www.aces.org/our-agency/request-for-proposals/open-rfps>.

1. Note it is the bidder's responsibility to review and obtain complete sets of the Bidding Documents in preparing their Bids.
2. Bidders shall use complete sets of Bidding Documents in preparing Bids. The Owner and the Architect assume no responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
3. Copies of the Bidding Documents are made available for the sole purpose of obtaining Bids on the Work. No license or permission is granted for any other use of the Bidding Documents.

1.4 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

- A. The Bidder shall carefully study and compare the Bidding Documents with each other, and with the site and local conditions. He shall request documents for other work being bid concurrently or presently under construction to the extent that it relates to the Work for which the Bid is submitted. If inconsistencies or ambiguities are discovered, the Bidder shall immediately report them to the Architect and Owner.
- B. Requests for clarification or interpretation of the Bidding Documents shall be made in writing. The Architect will accept requests for clarifications up until five (5) working days prior to the date the Bid is to be submitted. Clarification or Questions can be emailed to David Stein at [dstein@silverpetrucelli.com](mailto:dstein@silverpetrucelli.com).
- C. Interpretations, corrections and changes of the Bidding Documents will be made by written Addenda. Interpretations, corrections and changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon them.

## 1.5 SUBSTITUTIONS

- A. The materials, products and equipment described in the Bidding Documents establish the standard required for the function, dimension, appearance and quality to be met by any proposed substitution.
- B. No substitution will be considered prior to receipt of Bids unless the written request for approval has been received by the Architect by the date stipulated in the Invitation to Bid. Such requests shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. A statement setting forth changes in other materials, equipment or other portions of the Work including changes in the work of other contracts that incorporation of the proposed substitution would require shall be included. The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.
- C. If the Architect approves a proposed substitution prior to receipt of Bids, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.
- D. No substitutions will be considered after the Contract award unless specifically provided in the Contract Documents.
- E. Refer to Section 012500 "Substitution Procedures".

## 1.6 ADDENDA

- A. Addenda will be delivered promptly by the issuing office to all Bidders. **Each bidder is responsible for checking the website to determine if any addenda have been issued.**
- B. Addenda concerning technical matters will not be issued later than the stipulated day prior to the date for receipt of Bids. The Owner reserves the right to issue an Administrative Addendum at any time, withdrawing the request for Bids or postponing the date for receipt of Bids.
- C. Each Bidder shall confirm, prior to submitting a Bid that the Bidder has received all Addenda issued. The Bidder shall list the Addenda in the Bid.

## 1.7 BIDDING PROCEDURES

- A. The form and style of Bids shall conform to the Bid Form, provided with the Bid Documents.
  - 1. Bids shall be submitted on forms identical to the form supplied with the Bidding Documents.
  - 2. Completely fill in all blanks on the bid form. Use typewriter or ink.
  - 3. Express sums in both words and figures. In case of discrepancy between the two (2), the amount written in words shall govern.
  - 4. Interlineations, alterations and erasures must be clearly legible and initialed by the signer of the Bid.
  - 5. All requested Alternates shall be bid. If no change in the Base Bid is required, enter *No Change*.
  - 6. On each copy of the Bid, include the legal name of the Bidder and a statement that defines the circumstance of ownership and control. The name of each person signing the proposal shall be typed or printed below the signature. When the proposal is signed by an agent of the

Bidder, include evidence of current power of attorney. In every case, the proposal shall show the present business address of the Bidder, at which address communications will be received and service of notices accepted.

- a. If the Bidder is a corporation, the proposal shall be signed in the name of the corporation and sealed by a duly authorized officer of the corporation.
  - b. If the Bidder is a partnership, the proposal shall be signed in the name or title under which the organization is doing business by an officer whose official capacity shall be designated.
  - c. If the Bidder is an individual, that individual shall sign the proposal in person, stating the name or title, if any, under which that individual is doing business.
7. The following bid documents are to be submitted by the Bidder. All information and blanks must be filled in on the Proposal Form and the noted Exhibit pages as indicated below (only these listed pages of the Exhibits need to be returned as part of your Bid Submission).

Bid Form	All
Statement of Bidder's Qualification	All
Affirmative Action Policy Statement	One
Non-Collusion Affidavit of Bidder	One
Acceptance of Contract Terms	One
Exhibit B – Scope of Work	Signature Page

1.8 NOT USED

1.9 SUBMISSION OF BIDS

- A. One (1) original and three (3) copies of the Bid and other documents required to be submitted with the Bid shall be enclosed in a sealed envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name and address and, the designated Bid Package of the Work for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope labeled *SEALED BID ENCLOSED*.

Bids submitted VIA: U.S. Mail, Overnight Mail or Hand

Timothy Gunn  
Director of Facilities and Construction  
ACES Administration Building  
350 State Street  
North Haven, CT 06473

- B. Bid Submission is required to be submitted, on the enclosed forms to **ACES Administration Building, 350 State Street North Haven, CT 06473 on April 2, 2020 by 2:00 p.m.**
- C. Bids shall be deposited at the designated location prior to the time and date for receipt of Bids.
- D. The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.
- E. Oral, telephonic or telegraphic Bids are invalid and will not receive consideration.



---

1.10 MODIFICATION OR WITHDRAWAL OF BID

- A. A Bid may not be modified by the Bidder following the time and date designated for the receipt of Bids.
- B. A Bid submitted prior to the time and date designated for receipt of Bids, may be modified or withdrawn by notice to the party receiving Bids at the place designated for receipt of Bids. Such notice shall be in writing and signed by the Bidder. If notice is sent by telegram, written confirmation shall be mailed and postmarked on or before the date and time set for receipt of Bids. Any change shall be so worded as not to reveal the amount of the original Bid.
- C. Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.

## 1.11 CONSIDERATION OF BIDS

- A. The properly identified Bids received on time at Area Cooperative Education Services Administration Building, will be opened publicly and read aloud.
- B. The Owner and Construction Manager reserve the right to:
  - 1. Reject any or all Bids.
  - 2. Reject a Bid not accompanied by data required by the Bidding Documents.
  - 3. Reject a Bid which is in any way incomplete or irregular.

## 1.12 ACCEPTANCE OF BID

- A. It is the intent of the Owner to award a Contract to the lowest responsible Bidder offering the optimum combination of cost, service and schedule, provided that the apparent Low Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner reserves the right to accept or reject any or all bids and to award the contract to the bidder deemed to be for its best interest.
- B. The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the low Bidder on the basis of the sum of the Base Bid and Alternates accepted.
- C. The Bidder will be required to establish to the satisfaction of the Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.
- D. Prior to the award of the Contract, the Owner or Architect will notify the Bidder in writing if it has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, (1) withdraw the Bid, or (2) submit an acceptable substitute person or entity with an adjustment in the Base Bid or Alternate Bid to cover the difference in cost occasioned by such substitution. The Owner and Architect may accept the adjusted bid price or disqualify the Bidder.
- E. Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

1.13 NOT USED

1.14 INSURANCE

- A. The Successful Bidder shall submit Insurance Liability Coverage as per Exhibit C prior to commence of work on site.

1.15 LABOR AGREEMENT

- A. This project is a prevailing wage rate project per the Connecticut General Statutes § 31-53 and all amendments. All bids for contracts shall require compliance with Connecticut's prevailing wage laws pursuant to this statute. By submitting a bid, the Contractor shall acknowledge that it has informed itself as to the proper prevailing wage for its industry. All contractors shall provide certified payrolls and pay scale verification as may be required by the Connecticut Department of Labor, Construction Manager and/or Owner. Prevailing wage adjustments will not be considered a matter for an annual contract amendment.

1.16 NON-RESIDENT CONTRACTORS

- A. At the time of contract, signing a certificate from the Commissioner of Revenue Services shall be provided which evidences that C.G.S. 12-430 for non-resident contractors has been met. For details, call the Department of Revenue Services at 1-800-541-3280, ext. 7.

1.17 NOT USED

1.18 INCURRING COST

- A. Bidders are solely responsible for any and all cost or expenses incurred in the preparation and submission of this bid.

1.19 NOT USED

1.20 PRE-BID CONFERENCE

- A. A pre-bid conference for Bidders will be held on **March 18, 2020 at 3:00 p.m.** in the school located at 88 Bassett Road, North Haven.

1.21 PRECONSTRUCTION CONFERENCE

- A. Soon after the actual award of the contract (but in any event prior to the start of construction), authorized representatives of the Contractor shall attend a Pre-Construction Conference. Participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the work. The Construction Manager will forward the agenda to the successful bidder. The location of this conference will be at the Project Site or another convenient location as directed by the Construction Manager.

1.22 MISCELLANEOUS PROVISIONS

- A. A Bidder shall complete and include signed copies of the following documents as part of its Proposal: (i) Non-Collusion Affidavit of Bidder, (ii) Statement of Bidder's Qualifications, (iii) Affirmative Action Policy Statement and (iv) Acceptance of Contract Terms.

*(Documents set forth on following pages)*

**NON-COLLUSION AFFIDAVIT OF BIDDER**

State of \_\_\_\_\_ ) SS.  
County of \_\_\_\_\_ )

\_\_\_\_\_ being first duly sworn, deposes and say that:

- (1) He is \_\_\_\_\_, of \_\_\_\_\_ herein referred to as the "Bidder" that has submitted the attached Proposal;
- (2) He is fully informed respecting the preparation and content of the attached Proposal and of all pertinent circumstances respecting such Proposal;
- (3) Such Proposal is genuine and is not a collusive or sham Proposal;
- (4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Proposal in connection with the Contract for which the attached Proposal has been submitted or to refrain from bidding in connection with such Contract, or has in any manner directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Proposal or of any other Bidder, or to fix any overhead, profit or cost element of the Proposal price or the Proposal price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Area Cooperative Educational Services (ACES), or any person interested in the proposed Contract; and
- (5) The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties of interest, including this affiant.
- (6) That no officer or employee or person whose salary is payable in whole or in part from the Area Cooperative Educational Services (ACES) is directly or indirectly interested in this Proposal, or in the equipment, supplies, materials, work or labor to which it relates, or in any of the profits thereof.

Signed \_\_\_\_\_  
Title \_\_\_\_\_

Subscribed and sworn before me this

\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_

\_\_\_\_\_  
(Notary Public)

My Commission expires \_\_\_\_\_

## STATEMENT OF BIDDER'S QUALIFICATIONS

All items and questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. If necessary, questions may be answered on separate attached sheets. The bidder may submit any additional information it desires.

1. Name of Bidder \_\_\_\_\_
2. Bidder's Tax Identification No. \_\_\_\_\_
3. Permanent main office address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
4. When organized \_\_\_\_\_
5. If corporation, where incorporated \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
6. Number of years have you been engaged in the contracting business under your present firm or trade name \_\_\_\_\_  
\_\_\_\_\_
7. Contracts on hand: (Schedule these showing amount of each contract and the appropriate anticipated dates of completion) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
8. General character of work performed by your company \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
9. Have you ever failed to complete any work awarded to you? If so, where and why? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
10. Have you ever defaulted on a contract? If so, where and why? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
11. List the more important projects recently completed by your company, stating the approximate cost for each, and the month and year completed (use a separate sheet if necessary) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
12. List your major equipment available for this Contract \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

13. List your experience in work similar to this Project \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
14. List the background and experience of the principal members of your organization, including officers \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
15. List the work to be done by Subcontractors and summarize the dollar value of each Subcontract \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
16. Credit available \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
17. Bank Reference \_\_\_\_\_  
\_\_\_\_\_
18. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the Owner? \_\_\_\_\_

The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the Owner in verification of the recitals comprising this Statement of Bidder's Qualifications.

State of \_\_\_\_\_ )  
\_\_\_\_\_ ) SS. (Name of Bidder)

County of \_\_\_\_\_ ) By \_\_\_\_\_  
Title \_\_\_\_\_  
Date: \_\_\_\_\_

being duly sworn deposes and says that (s)he is \_\_\_\_\_ of \_\_\_\_\_,  
and that the answers to the foregoing items and questions and all statements therein contained are true and correct.

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

\_\_\_\_\_  
(Notary Public)

My Commission expires \_\_\_\_\_

## ***AFFIRMATIVE ACTION POLICY STATEMENT***

*(must be submitted on your firm 's letterhead)*

It has always been the policy and will continue to be the strong commitment of \_\_\_\_\_

and all contractors and subcontractors who do business with Area Cooperative Educational Services (ACES) to provide equal opportunities in employment to all qualified persons solely on the basis of job-related skills, ability and merit.

\_\_\_\_\_ will continue to take Affirmative Action to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, sex, national origin, ancestry, mental disorder (present or past history thereof), age, physical disability (but not limited to blindness), marital status, mental retardation, and criminal record. Such action includes, but is not limited to, employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation and selection for training including apprenticeship, and its subcontractors will continue to make good faith *efforts* to comply with all federal and state laws and policies which speak to equal employment opportunity.

The principles of Affirmative Action are addressed in the 13th, 14th, and 15th Amendments of the United States Constitution, Civil Rights Act of 1866, 1870, 1871, Equal Pay Act of 1963, Title VI and VII of - the 1964 United States Civil Rights Act, Presidential Executive Orders 11246, amended by 11375, (nondiscrimination under federal contracts), Act I, Sections 1 and 20 of the Connecticut Constitution, Governor Grasso's Executive Order Number 11, Governor O'Neill's Executive Order Number 9, the Connecticut Fair Employment Practices Law (Sec. 46a-60-69) of the Connecticut General Statutes, Connecticut Code of Fair Practices (46a-70-8 1), Deprivation of Civil Rights (46a-58(a)(d)), Public Accommodations Law (46a-63 -64), Discrimination against Criminal Offenders (46a-80), definition of Blind (46a-51(1)), definition of Physically Disabled (46a-51(15)), definition. of Mentally Retarded (46a-51(13)), cooperation with the Commission on Human Rights and Opportunities (46 - 77), Sexual Harassment (46a-60(a)-8), Connecticut Credit Discrimination Law (36-436 through 439), Title I of the State and Local Fiscal Assistance Act of 1972.

This Affirmative Action Policy Statement re-affirms my personal commitment to the principles of Equal Employment Opportunity.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Authorized Signer

## ACCEPTANCE OF CONTRACT TERMS

\_\_\_\_\_ as a condition of satisfying Invitation to Bid requirements of that certain document entitled "Rescue Window Installation at 88 Bassett Road" hereby accepts the terms and conditions of the Contract included and such exhibits and attached to said bid document **without** exception.

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title

\_\_\_\_\_  
Printed Name



TO: Area Cooperative Education Services (ACES)  
350 State Street  
North Haven, CT 06473

FROM:

Proposal Submitted By: \_\_\_\_\_  
Bid Proposal Date: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone #: \_\_\_\_\_  
Email: \_\_\_\_\_

**Project: RESCUE WINDOW INSTALLATION at 88 Bassett Road**

**BASE BID:**

We have examined the Contract Documents and the site for the captioned project. We are familiar with all of the requirements of the Documents and existing conditions relative to the execution of this Work. The above noted Bidder hereby proposes to furnish and install all work, labor, material, transportation, protection, apparatus, engineering, equipment, tools, scaffolds, appliances, documentation, services, and all other means and conditions necessary for this Project including, but not limited to, all Work required by the Project Drawings and Specifications, dated March 3, 2020, the Scope of Work as itemized in Exhibit "B", and all requirements of the ACES Agreement for the totally inclusive lump sum amount of:

**TOTAL LUMP SUM AMOUNT (Words)**

\_\_\_\_\_

**TOTAL LUMP SUM AMOUNT (Figures)**

\$ \_\_\_\_\_

Cost Break Down per Phase:

**Phase 1: Install sixteen (16) windows all Work complete by August 21, 2020:**

\$ \_\_\_\_\_

**Phase 2: Install fifteen (15) windows all Work complete by August 21, 2021:**

\$ \_\_\_\_\_

**Phase 3: Install fifteen (15) windows all Work complete by August 21, 2022:**

\$ \_\_\_\_\_

The above work shall start at the end of the school year and be performed over the summer and must be complete by the start of the next school year as indicated in the contract documents.

**Unit Prices:**

Item	Description	Unit Price
1.	Add rescue window, provision and installation, as specified	\$ each

This Bid Package proposal price is valid for sixty (60) calendar days from the date of the bid opening.

Bidder shall not include in their bid proposal nor shall they charge for any state, local or federal taxes for any fixtures or property to become a permanent part of the project due to ACES exempt status. The Bidder is responsible for all other project related state, local or federal taxes that are not exempt.

The Bidder shall include the cost of all required Local Building Permits.

### **LOWER TIER SUBCONTRACTS**

The successful bidder shall provide a list of lower tier subcontractors and vendors/suppliers within ten (10) days of award of this Contract. List shall include lower tier subcontractors or vendor/suppliers name, address, telephone and fax numbers, contact person, work being performed, FEIN/Social Security numbers and Connecticut Tax Registration Numbers.

### **ADDENDA RECEIPT**

The undersigned hereby acknowledges receipt of Addenda Nos. \_\_ through \_\_ inclusive and have included their provisions in the Bid.

### **ERROR CERTIFICATION**

The undersigned certifies that the attached list includes any and all defects, errors, inconsistencies or omissions in the Bidding Documents of which he is aware, either directly, or by notification from any sub-bidder or material supplier.

If none, enter *NONE*: \_\_\_\_\_

### **In submitting this Bid, I agree:**

To accept all provisions of the Project Contract, Project Manual including Drawings and Addenda.

If awarded on the basis of this bid, to enter into and execute the ACES Agreement without modifications, and shall return fully executed Agreement to ACES within seven (7) days upon receipt of Agreement

To accomplish the Work in accordance with the Contract Documents, in the time stipulated therein.

To cooperate in every respect with the Architect and Owner and other Subcontractors working on this Project. Including cooperating with the suppliers and installers of equipment, if any, purchased by the Owner under separate contracts.

### **The undersigned further attests and affirms that:**

The Bidder has not colluded with any other person in regard to this Bid or any component Sub-bid. No person employed by the Contractor has exercised influence, provided confidential information, or stands to profit from this Bid or the Work described in the Bid Documents.

The Bidder has a current appropriate license from the State of Connecticut.

The Bidder is not presently barred from bidding or performing work in any jurisdiction, due to noncompliance with Affirmative Action or Equal Opportunity regulations. The Bidder is not on the list of disqualified contractors maintained by the Connecticut Department of Labor for persons or firms who have been found to disregard of their obligations under Connecticut General Statutes §31-53, et seq. as amended, and Connecticut General Statutes §31-76, nor have they been barred from Federal Government contracts in accordance with the provisions of the Davis-Bacon Act, 40 U.S.C §276a-2.

BIDDER

Name of Firm \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_

Signature \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

(Corporate Seal, if applicable)

All spaces must be filled in the bids to be formal. If bidder is a corporation, write state of incorporation. If partnership, give full names of all partners. Attach copy of current Power of Attorney if appropriate.



# DRAFT AIA® Document A107™ – 2007

## *Standard Form of Agreement Between Owner and Contractor for a Project of Limited Scope*

### ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

**ELECTRONIC COPYING** of any portion of this AIA® Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

# DRAFT AIA® Document A107™ – 2007

## Standard Form of Agreement Between Owner and Contractor for a Project of Limited Scope

AGREEMENT made as of the » day of » in the year «2020 »  
(In words, indicate day, month and year.)

BETWEEN the Owner:  
(Name, legal status, address and other information)

« Area Cooperative Educational Services (ACES) »  
« 350 State Street »  
« North Haven, CT 06473 »

and the Contractor:  
(Name, legal status, address and other information)

« [TBD] »  
« »  
« »

for the following Project:  
(Name, location and detailed description)

« RESCUE WINDOW INSTALLATION at 88 BASSETT ROAD »  
« ACES Wintergreen Magnet School »  
« 88 Bassett Road »  
« North Haven, Ct. 06473 »

The Architect:  
(Name, legal status, address and other information)

« Silver / Petrucelli + Associates »  
« 3190 Whitney Avenue »  
« Hamden, Ct. 06518-2340 »  
« »

### ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

**ELECTRONIC COPYING** of any portion of this AIA® Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

## TABLE OF ARTICLES

1	THE WORK OF THIS CONTRACT
2	DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
3	CONTRACT SUM
4	PAYMENT
5	DISPUTE RESOLUTION
6	ENUMERATION OF CONTRACT DOCUMENTS
7	GENERAL PROVISIONS
8	OWNER
9	CONTRACTOR
10	ARCHITECT
11	SUBCONTRACTORS
12	CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
13	CHANGES IN THE WORK
14	TIME
15	PAYMENTS AND COMPLETION
16	PROTECTION OF PERSONS AND PROPERTY
17	INSURANCE & BONDS
18	CORRECTION OF WORK
19	MISCELLANEOUS PROVISIONS
20	TERMINATION OF THE CONTRACT
21	CLAIMS AND DISPUTES

### ARTICLE 1 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

The Contractor shall perform the Work in accordance with the Contract Documents and the Contractor shall obtain and post all necessary permits at the site.

The Contractor shall schedule and perform the Work so as not to interfere with any related or unrelated work being performed by the Owner in or about the site. The Contractor should use its best efforts to minimize its interference with the Owner's continued use of the entire facility, including the grounds.

## ARTICLE 2 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 2.1 The date of commencement of the Work shall be the date of this Agreement unless a different date is stated below or provision is made for the date to be fixed in a notice to proceed.

*(Insert the date of commencement, if it differs from the date of this Agreement or, if applicable, state that the date will be fixed in a notice to proceed.)*

«The Date of Commencement of the Work will be set forth in a notice to proceed issued by the Owner. »

§ 2.2 The Contract Time shall be measured from the date of commencement.

§ 2.3 The Contractor shall achieve Substantial Completion of the entire Work not later than **as specified in the Contract Documents**, (“Substantial Completion Date”):

*(Insert number of calendar days. Alternatively, a calendar date may be used when coordinated with the date of commencement. If appropriate, insert requirements for earlier Substantial Completion of certain portions of the Work.)*

« Phase 1 Install 16 windows all Work complete by August 21, 2020:

Phase 2 Install 15 windows all Work complete by August 21, 2021:

Phase 3 Install 15 windows all Work complete by August 21, 2022:

The above phased Work shall start at the end of each school year and be performed over the summer and must be complete by the start of the next school year as indicated in the contract documents.

»

Portion of Work	Substantial Completion Date
Phase 1	August 21, 2020
Phase 2	August 21, 2021
Phase 3	August 21, 2021

, subject to adjustments of this Contract Time as provided in the Contract Documents.

*(Insert provisions, if any, for liquidated damages relating to failure to achieve Substantial Completion on time or for bonus payments for early completion of the Work.)*

TIME IS OF THE ESSENCE in the performance of the Work.

§ 2.4 The Project shall be deemed to have achieved Substantial Completion when the Architect has issued a Certificate of Substantial Completion.

## ARTICLE 3 CONTRACT SUM

§ 3.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be one of the following:

*(Check the appropriate box.)*

[ ☒ ] Stipulated Sum, in accordance with Section 3.2 below

[ ☐ ] Cost of the Work plus the Contractor's Fee, in accordance with Section 3.3 below

[ ☐ ] Cost of the Work plus the Contractor's Fee with a Guaranteed Maximum Price, in accordance with Section 3.4 below

*(Based on the selection above, complete Section 3.2, 3.3 or 3.4 below.)*



§ 3.2 The Stipulated Sum shall be [TBD]Dollars (\$[TBD]), subject to additions and deductions as provided in the Contract Documents.

§ 3.2.1 The Stipulated Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:

*(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)*

« »

§ 3.2.2 Unit prices, if any:

*(Identify and state the unit price, and state the quantity limitations, if any, to which the unit price will be applicable.)*

Item	Units and Limitations	Price Per Unit (\$ 0.00)
Cost to add addition Rescue Window(s)		

§ 3.2.2.1 If applicable, the Unit Price shall be inclusive of all costs for the completion of the Work in accordance with the Contract Documents, including without limitation, all labor, equipment, materials, transportation, placement, benefits, insurance, overhead and profit and means and methods.

§ 3.2.3 Allowances included in the stipulated sum, if any:

*(Identify allowance and state exclusions, if any, from the allowance price.)*

Item	Allowance

### § 3.3 COST OF THE WORK PLUS CONTRACTOR'S FEE N/A

§ 3.3.1 The Cost of the Work is as defined in Exhibit A, Determination of the Cost of the Work.

§ 3.3.2 The Contractor's Fee:

*(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee and the method of adjustment to the Fee for changes in the Work.)*

« »

### § 3.4 COST OF THE WORK PLUS CONTRACTOR'S FEE WITH A GUARANTEED MAXIMUM PRICE N/A

§ 3.4.1 The Cost of the Work is as defined in Exhibit A, Determination of the Cost of the Work.

§ 3.4.2 The Contractor's Fee:

*(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee and the method of adjustment to the Fee for changes in the Work.)*

### § 3.4.3 GUARANTEED MAXIMUM PRICE N/A

§ 3.4.3.1 The sum of the Cost of the Work and the Contractor's Fee is guaranteed by the Contractor not to exceed « » (\$ « »), subject to additions and deductions by changes in the Work as provided in the Contract Documents. Such maximum sum is referred to in the Contract Documents as the Guaranteed Maximum Price. Costs which would cause the Guaranteed Maximum Price to be exceeded shall be paid by the Contractor without reimbursement by the Owner.

*(Insert specific provisions if the Contractor is to participate in any savings.)*

« »

§ 3.4.3.2 The Guaranteed Maximum Price is based on the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:

« »

**§ 3.4.3.3** Unit Prices, if any:  
(Identify and state the unit price, and state the quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price Per Unit (\$ 0.00)

**§ 3.4.3.4** Allowances included in the Guaranteed Maximum Price, if any:  
(Identify and state the amounts of any allowances, and state whether they include labor, materials, or both.)

Item	Allowance

**§ 3.4.3.5** Assumptions, if any, on which the Guaranteed Maximum Price is based:

## ARTICLE 4 PAYMENTS

### § 4.1 PROGRESS PAYMENTS

**§ 4.1.1** Based upon Applications for Payment submitted to the Architect by the Contractor, including all supporting documentation reasonably requested of the Contractor by the Owner, and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

**§ 4.1.2** The period covered by each Application for Payment shall be as follows:

«For the first Application for Payment, from the Date of Commencement through the last day of the month of the Date of Commencement. For each subsequent Application for Payment, from the first day of one month through the last day of the same month. »

**§ 4.1.3** Provided that an Application for Payment is received by the Architect not later than the «first business» day of a month, the Owner shall make payment of the certified amount to the Contractor not later than the «30th» day of the «same» month. If an Application for Payment is received by the Architect after the date fixed above, payment shall be made by the Owner not later than «forty- five» («45») days after the Architect receives the Application for Payment.

(Federal, state or local laws may require payment within a certain period of time.)

The amount of each progress payment shall be completed as follows:

- .1 Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values, less retainage of «five » percent («5»%). Pending final determination of cost to the Owner of changes in the Work, amounts not in dispute shall be included;
- .2 Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing), less retainage of «five» percent («5»%);
- .3 Subtract the aggregate of previous payments made by the Owner; and
- .4 Subtract amounts, if any, for which the Architect has withheld or nullified a Certificate for Payment.

**§ 4.1.4** Retainage, if any, shall be withheld as follows:

Retainage of five percent (5%) shall be withheld from all payments due from the Owner to the Contractor hereunder.

**§ 4.1.5** Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

(Insert rate of interest agreed upon, if any.)

## § 4.2 FINAL PAYMENT

§ 4.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Section 18.2, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued by the Architect.
- .3 satisfactory Releases, Consent of Surety and other Owner-required documentation have been furnished to the Owner.

§ 4.2.2 The Owner's final payment to the Contractor shall be made no later than forty-five (45) days after the issuance of the Architect's final Certificate for Payment:

§ 4.3 Any provision herein to the contrary notwithstanding, the Owner shall not be obligated to make payment to the Contractor hereunder to the extent any one or more of the following conditions exist:

- .1 The Contractor is in default of any of its obligations hereunder or otherwise is in default under any of the Contract Documents;
- .2 Any part of such payment is attributable to Work which the Owner or Architect determines that, because of the fault or neglect of the Contractor, is defective or not performed in accordance with the Contract Documents; provided, however, such payment shall be made as to the part thereof attributable to the Work which is performed in accordance with the Contract Documents and is not otherwise defective; or
- .3 The Contractor has failed to make payments properly to the Contractor's subcontractors or for material or labor used in the Work for which the Owner has made payment to the Contractor.

§ 4.4 The Contractor shall use the sums advanced to it solely for the purpose of performance of the Work and the construction, furnishing, and equipping of the improvements in accordance with the Contract Documents.

§ 4.5 With the submission of each Application for Payment, beginning with the second Application for Payment, the Contractor shall furnish to the Owner a release and waiver of mechanics liens from Subcontractors and material suppliers for all previous payments made by the Owner.

## ARTICLE 5 DISPUTE RESOLUTION

### § 5.1 BINDING DISPUTE RESOLUTION

For any claim subject to, but not resolved by, mediation pursuant to Section 21.3, the method of binding dispute resolution shall be as follows:

*(Check the appropriate box. If the Owner and Contractor do not select a method of binding dispute resolution below, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, claims will be resolved in a court of competent jurisdiction.)*

☐ Arbitration pursuant to Section 21.4 of this Agreement

☐ Litigation in a court of competent jurisdiction

☒ Other *(Specify)*

§ 5.1.1 All disputes, claims or other matters in question between the parties shall be subject to determination by a court of competent jurisdiction, except as provided in Section 5.1.2. The venue for such court action shall be the Connecticut Superior Court, Judicial District of New Haven at New Haven, Connecticut.

§ 5.1.2 The Owner, at its sole discretion and option, may elect to have all claims, disputes or other matters in question between the parties to this Agreement decided by binding arbitration. In the event of such an election by the Owner, the provisions of Sections 21.4 through 21.7 shall apply.

## ARTICLE 6 ENUMERATION OF CONTRACT DOCUMENTS [TBD]

§ 6.1 The Contract Documents are defined in Article 7 and, except for Modifications issued after execution of this Agreement, are enumerated in the sections below.

§ 6.1.1 The Agreement is this executed AIA Document A107–2007, Standard Form of Agreement Between Owner and Contractor for a Project of Limited Scope.

§ 6.1.2 The Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
Contractor's Proposal			
Asbestos Operations and Maintenance Plan Gateway Community Technical College		May 2002	161
Asbestos Hazardous Emergency Response Act Initial Asbestos Inspection and Management plan		August 9, 2019	274

§ 6.1.3 The Specifications:

*(Either list the Specifications here or refer to an exhibit attached to this Agreement.)*

Section	Title	Date	Pages
Drawings			
Specifications			

§ 6.1.4 The Drawings:

*(Either list the Drawings here or refer to an exhibit attached to this Agreement.)*

»

Number	Title	Date

§ 6.1.5 The Addenda, if any:

Number	Date	Pages

Portions of Addenda relating to bidding requirements are not part of the Contract Documents unless the bidding requirements are enumerated in this Article 6.

§ 6.1.6 Additional documents, if any, forming part of the Contract Documents:

.1 Other documents:

*(List here any additional documents that are intended to form part of the Contract Documents.)*

Exhibit A - Insurance Requirements

## ARTICLE 7 GENERAL PROVISIONS

### § 7.1 THE CONTRACT DOCUMENTS

The Contract Documents are enumerated in Article 6 and consist of this Agreement (including, if applicable, Supplementary and other Conditions of the Contract), Drawings, Specifications, Addenda issued prior to the execution of this Agreement, other documents listed in this Agreement and Modifications issued after execution of this Agreement. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Architect. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by

one shall be as binding as if required by all; performance by the Contractor shall be required to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

## **§ 7.2 THE CONTRACT**

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind between any persons or entities other than the Owner and the Contractor; provided, however, that the Owner shall be a third party beneficiary of the agreements between the Contractor and its Subcontractors, if any, pursuant to Section 11.3 hereof.

## **§ 7.3 THE WORK**

The term “Work” means the construction and services required by the Contract Documents and the work which can reasonably be inferred as necessary to produce the results intended by the Contract Documents and, except to the extent inconsistent with the Contract Documents, such construction and services as are usually and customarily provided in conjunction with, or in furtherance of, such work, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor’s obligations. The Work may constitute the whole or a part of the Project.

## **§ 7.4 INSTRUMENTS OF SERVICE**

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect’s consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

## **§ 7.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE**

**§ 7.5.1** The Architect and the Architect’s consultants shall be deemed the author and owner of their respective Instruments of Service, including the Drawings and Specifications, and will retain all common law, statutory and other reserved rights, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect’s or Architect’s consultants’ reserved rights.

**§ 7.5.2** The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect’s consultants.

## **§ 7.6 TRANSMISSION OF DATA IN DIGITAL FORM**

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmission, unless otherwise provided in the Agreement or in the Contract Documents.

**§ 7.7** The Contractor shall be responsible for the performance of the Work as an independent contractor and in a good and workmanlike manner (i) consistent with the Contract Documents; (ii) consistent with the instructions, guidance and direction of the Owner and Architect; (iii) consistent with the prevailing applicable professional or industry standards; (iv) consistent with sound practices; (v) as expeditiously as is consistent with such professional skill and care and the orderly progress of the Work and with the Contract Documents and the instructions, guidance and direction of the Owner and Architect; and (vi) in a manner that will not exceed the contract Sum as set forth in the Agreement (the standards of this Section 7.7 shall be referred to herein as the “Contractor’s Standard of Care”). The Contractor shall exercise the Contractor’s Standard of Care in performing all aspects of the Work. All references in the Contract Documents to the knowledge, inference, reliance, awareness, determination, belief, observation, recognition or discovery of the Contractor or reference to any similar term shall include the constructive knowledge, inference, reliance, awareness, determination, belief, observation, recognition attributed to



the Contractor (“constructive knowledge”). Such constructive knowledge shall include the knowledge, inference, reliance, awareness, determination, belief, observation and recognition the Contractor would have obtained upon the exercise of the Contractor’s Standard of Care.

**§ 7.7.1** The Contractor shall be responsible for the performance of the Work in accordance with the Contract Documents and the Conditions (as defined hereinafter), and the Contractor shall obtain and post all necessary permits at the site. The “Conditions” are all applicable laws, rules, regulations, ordinances, codes, orders, guidelines, standards and conditions of funding imposed on the Work and/or Project by the Agencies, as defined hereinafter. Any reference in the Contract Documents to “applicable law” shall include the Conditions.

**§ 7.7.1.1** The “Agencies” are all federal, state, and local governmental authorities having regulatory or administrative jurisdiction over the Work and/or the Project and all representatives or designees of such other governmental authorities.

**§ 7.7.1.2** Notwithstanding anything to the contrary in this Agreement, the Contractor shall attend such meetings and site-visits, and make such submissions, as are necessary to comply with applicable law, including the Conditions.

**§ 7.8** Any information obtained by the Contractor from the Owner may not be used, published, distributed, sold or divulged by the Contractor or its Subcontractor or Sub-subcontractors for such party’s own purposes or for the benefit of any person, firm, corporation or other entity other than the Owner, without the prior written consent of the Owner. Any information obtained by the Contractor of its Subcontractors or Sub-subcontractors that is designated by the Owner in accordance with applicable law as confidential shall not be disclosed to any other parties without the prior written consent of the Owner.

## **ARTICLE 8 OWNER**

### **§ 8.1 INFORMATION AND SERVICES REQUIRED OF THE OWNER**

**§ 8.1.1** The Owner shall furnish all necessary surveys and a legal description of the site.

**§ 8.1.2** The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

**§ 8.1.3** Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 9.6.1, the Owner shall secure and pay for other necessary approvals, easements, assessments and charges required for the construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

### **§ 8.2 OWNER’S RIGHT TO STOP THE WORK**

If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents, or fails to carry out the Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity.

### **§ 8.3 OWNER’S RIGHT TO CARRY OUT THE WORK**

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents, and fails within a ten-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner, without prejudice to any other remedy the Owner may have, may correct such deficiencies and may deduct the reasonable cost thereof, including Owner’s expenses and compensation for the Architect’s services made necessary thereby, from the payment then or thereafter due the Contractor.

**§ 8.4** Any data provided by the Owner to the Contractor concerning the physical characteristics or measurements of the components that comprise the Project site; access to the Project site or staging and storing at the Project site; present obstructions and conditions of structures on or near the Project site and other data concerning the conditions of the Project site and its surroundings, have been obtained from sources the Owner believes to be reliable. Accuracy of such data, however, is not guaranteed and is furnished solely for accommodation of the Contractor.

## **ARTICLE 9 CONTRACTOR**

### **§ 9.1 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR**

**§ 9.1.1** Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become informed of the local conditions under which the Work is to be performed including the location, condition, accessibility, layout and nature of the Project site; the generally prevailing climactic conditions; the anticipated labor supply and costs; and the availability and costs of materials, tools and equipment and has correlated such personal observations with the requirements of the Contract Documents. Neither the Contract Sum nor the Contract Time shall be adjusted as a result of a failure by the Contractor to have conducted the activities described in this Section 9.1.1.

**§ 9.1.2** Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 8.1.1, shall take field measurements of any existing conditions related to that portion of the Work and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies, or omissions to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional unless otherwise specifically provided in the Contract Documents. If the Contractor performs any construction activity which it should have known constitutes an error, inconsistency or omission in the Contract Documents without such notice to the Architect, the Contractor shall assume appropriate responsibility for such performance and shall bear an appropriate amount of the attributable costs for correction.

**§ 9.1.3** The Contractor is not required to ascertain that the Contract Documents are in accordance with the Conditions as defined herein or applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall review the Contract Documents and notify the Owner of any such nonconformity of which the Contractor has knowledge and shall promptly report any such nonconformity to the Owner.

**§ 9.1.4** The Owner assumes no contractual liability or responsibility for the physical condition or safety of the Project site or of any improvements thereon. As between the Contractor and the Owner, the Contractor shall be solely responsible for providing a safe place for the performance of the Work.

### **§ 9.2 SUPERVISION AND CONSTRUCTION PROCEDURES**

**§ 9.2.1** The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures, and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters.

**§ 9.2.2** The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for or on behalf of the Contractor or any of its Subcontractors.

**§ 9.2.3** The Contractor shall schedule and perform the Work so as not to interfere with any other related or unrelated work being performed by the Owner in or about the site.

### **§ 9.3 LABOR AND MATERIALS**

**§ 9.3.1** Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

**§ 9.3.2** The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

**§ 9.3.3** The Contractor may make a substitution only with the consent of the Owner, after evaluation by the Architect and in accordance with a Modification and subject to the provisions of Sections 9.3.3.1 and 9.3.3.2.

**§ 9.3.3.1** Approval by the Owner of any such substitution shall not relieve the Contractor requesting the substitution of responsibility for any additional costs incurred by other trades for changes made necessary to accommodate the substituted item.

**§ 9.3.3.2** By making requests for substitutions, the Contractor:

- .1 represents that the Contractor has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified;
- .2 represents that the Contractor will provide the same warranty for the substitution that the Contractor would for that specified;
- .3 certifies that the cost data presented is complete and includes all related costs under this Contract except the Architect's redesign costs, and waives all claims for additional costs related to substitution which subsequently become apparent; and
- .4 shall coordinate the installation of the accepted substitution, making such changes as may be required for the Work to be complete in all respects.

**§ 9.3.4** Directions, specifications and recommendations by manufacturers for installation, handling, storing, adjustment, and operation of their materials or equipment shall be complied with, but the Contractor shall nonetheless have the responsibility for determining whether such directions, specifications, and recommendations may safely and suitably be employed in the Work, and for notifying the Architect in advance in writing of any deviation or modification necessary for installation safety or proper operation of the item..

#### **§ 9.4 WARRANTY**

The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation or normal wear and tear under normal usage. In addition, the Owner shall be entitled to any and all manufacturer's warranties and the Contractor hereby assigns any and all such warranties to the Owner.

**§ 9.4.1** The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or explicitly permit otherwise.

**§ 9.4.2** The Contractor warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects. This warranty does not apply to those defects, inherent in the quality of the Work the Contract Documents require and that the Contractor reported. Substitutions not properly approved and authorized shall be considered to have failed to conform to the Contract Documents. Work, materials or equipment which fails to perform under the proper use and normal wear for intended purposes for a period of one year after the date of Substantial Completion, except where warranties for longer durations are called for by the Contract Documents, shall be considered defective. If required by the Architect or the Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

**§ 9.4.3** The warranties under this Section 9.4 shall be in addition to, and not a substitute for, any other rights of the Owner under the Contract Documents or existing in law or equity.

#### **§ 9.5 TAXES**

The Owner is a tax-exempt entity. The Contractor shall be familiar with the current regulations of the Connecticut Department of Revenue Services and the sales or use tax on materials or supplies exempted by such regulations shall not be included as part of the bid or the Contract Sum. A sales tax certificate will be provided by the Owner.



## **§ 9.6 PERMITS, FEES, NOTICES, AND COMPLIANCE WITH LAWS**

**§ 9.6.1** Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for such permits, fees, licenses and inspections by government agencies as are necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

**§ 9.6.2** The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work. If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

## **§ 9.7 ALLOWANCES**

The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. The Owner shall select materials and equipment under allowances with reasonable promptness. Allowance amounts shall include the costs to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts. Allowance amounts shall not include the Contractor's costs for unloading and handling at the site, labor, installation, overhead, and profit.

## **§ 9.8 CONTRACTOR'S CONSTRUCTION SCHEDULES**

**§ 9.8.1** The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's approval and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project and with the prior review and approval of the Owner, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

**§ 9.8.2** The Contractor shall be responsible for the performance of the Work in general accordance with the most recently approved schedule.

**§ 9.8.3** In the event the Owner determines that the performance of the Work has not progressed or reached the level of completion required by the Contract Documents, the Owner shall have the right, but not the obligation, to order the Contractor to take corrective measures necessary to expedite the progress of construction, including, without limitation, (1) working additional shifts or overtime, (2) supplying additional manpower, equipment, and facilities, and (3) other similar measures (hereinafter referred to collectively as "Extraordinary Measures"). Such Extraordinary Measures shall continue until the progress of the Work complies with the stage of completion required by the Contract Documents. The Owner's right to require Extraordinary Measures is solely for the purposes of ensuring the Contractor's compliance with the Construction Schedule as adjusted for time extensions granted pursuant to Section 14.5. Except as provided herein, the Contractor shall not be entitled to an adjustment in the Contract Sum in connection with Extraordinary Measures required by the Owner pursuant to this Section 9.8.3. The Owner may exercise the rights furnished the Owner under or pursuant to this Section 9.8.3 as frequently as the Owner deems necessary to ensure that that Contractor's performance of the Work will comply with the Substantial Completion Date, as the same may be extended by Change Order.

## **§ 9.9 SUBMITTALS**

**§ 9.9.1** The Contractor shall review for compliance with the Contract Documents and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in coordination with the Contractor's construction schedule and in such sequence as to allow the Architect reasonable time for review. By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner that the Contractor has (1) reviewed and approved them; (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so; and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents. The Contractor shall indicate approval on the submittals as evidence of such review and coordination. Submittals made to the Architect without such indication of approval may be returned to the Contractor for resubmission. The Work shall be in accordance with approved submittals.

**§ 9.9.2** Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents.

#### **§ 9.10 USE OF SITE**

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

#### **§ 9.11 CUTTING AND PATCHING**

The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly.

#### **§ 9.12 CLEANING UP**

The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus material from and about the Project.

#### **§ 9.13 ROYALTIES, PATENTS AND COPYRIGHTS**

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if the Contractor knew that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Owner and the Architect.

#### **§ 9.14 ACCESS TO WORK**

The Contractor shall provide the Owner and Architect access to the Work in preparation and progress wherever located.

#### **§ 9.15 INDEMNIFICATION**

**§ 9.15.1** To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, and its respective consultants, agents, representatives, officials, and employees from and against claims, suits and/or legal actions of any type by third-parties, including without limitation claims for loss of or damage to property, personal or bodily injury, including death, and claims for losses of any type; from all judgments or decrees recovered therefore; and from all expenses for defending such claims, suits or legal actions, including without limitation court costs and reasonable attorneys' fees, to the extent which result or arise from the negligent acts or omissions, breaches, errors or other improper unauthorized and/or unlawful acts of the Contractor; defects or breaches of warranty in, caused by, or related to the Work; and/or the Contractor's failure to comply with the provisions of the Contract Documents. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section 9.15.1.

As to any and all claims against the Owner or any of its Contractors, agents or employees by any employee of the Contractor, by any person or organization directly or indirectly employed by the Contractor to perform or furnish any of the Work, or by anyone for whose acts the Contractor may be liable, the indemnification obligation stated herein shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor under worker's or workman's compensation acts, disability benefit acts or other employee benefit acts.

**§ 9.15.2** In claims against any person or entity indemnified under this Section 9.15 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section 9.15.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

**§ 9.16** The Contractor shall comply with the Conditions and all local, state and federal laws, rules and regulations applicable to the Contractor, including without limitation those relating to equal opportunity, labor, wages and employment.

**§ 9.17** If any governmental body having jurisdiction over the Work requires licenses or registrations for the performance of the Work or any part thereof, the Contractor shall hold such valid licenses or registrations as may be required by law to prosecute the Work to completion. If any part of the Work for which such a license or registration is required is to be performed by Subcontractors of any tier, the Contractor shall ensure that such Subcontractors hold such valid licenses or registrations as may be required by law to prosecute said Work to completion.

**§ 9.18** The Contractor shall send a qualified representative to periodic progress meetings held at such time and at such place as the Owner shall designate and to such other meetings as are necessary to comply with the Conditions.

## **ARTICLE 10 ARCHITECT**

**§ 10.1** The Architect will provide administration of the Contract on behalf of the Owner until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified in writing in accordance with other provisions of the Contract. Notwithstanding the above, the Owner intends to have an on-site project manager, on a day-to-day basis, as its Owner's representative, to inspect and monitor progress of the Work and to coordinate the Architect's administration of the Contract with the Contractor's performance of the Work.

**§ 10.2** The Architect will visit the site at intervals appropriate to the stage of the construction, including regularly scheduled site meetings and visits, to become familiar with the progress and quality of the portion of the Work completed, to guard the Owner against defects and deficiencies in the Work, and to determine if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

**§ 10.3** On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and inform the Owner in writing of (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

**§ 10.4** Based on the Architect's evaluations of the Work and of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

**§ 10.5** The Architect has authority to reject Work that does not conform to the Contract Documents and to require inspection or testing of the Work.

**§ 10.6** The Architect will review and approve or take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

**§ 10.7** The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect will make initial decisions on all claims, disputes and other matters in question between the Owner and Contractor but will not be liable for results of any interpretations or decisions rendered in good faith.

**§ 10.8** The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 10.9 Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Architect. Consent shall not be unreasonably withheld.

## ARTICLE 11 SUBCONTRACTORS

§ 11.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site.

§ 11.2 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the names of the Subcontractors or suppliers for each of the principal portions of the Work. The Contractor shall not contract with any Subcontractor or supplier to whom the Owner or Architect has made reasonable written objection within ten days after receipt of the Contractor's list of Subcontractors and suppliers. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 11.2.1 To facilitate and expedite the investigations of such proposed persons or entities, the Contractor shall submit a statement in writing in sufficient detail to establish that each has the capacity to carry out the portion of the Work such person or entity is proposing to provide. All such submittals shall include a list of principal personnel of any such entity, and an analysis of the financial condition, construction plant, equipment and facilities of any such person or entity.

§ 11.3 Contracts between the Contractor and Subcontractors shall (1) require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by the terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by the Contract Documents, assumes toward the Owner and Architect, and (2) allow the Subcontractor the benefit of all rights, remedies and redress against the Contractor that the Contractor, by these Contract Documents, has against the Owner. The Owner shall be a third-party beneficiary of all contracts between the Contractor and its Subcontractors.

§ 11.4 Within ten (10) calendar days after payment to Contractor by the Owner, the Contractor shall pay any amounts due any subcontractor, whether for labor performed or materials furnished when such labor or material has been included in requisition submitted by such Contractor and paid by Owner. The Contractor shall promptly give notice to the Owner of any claim or demand by a Subcontractor claiming that any amount is due to such Subcontractor or claiming any default by the Contractor in any of the Contractor's obligations to such Subcontractor.

§ 11.5 The Contractor shall include in each of the subcontracts a provision requiring each Subcontractor to pay any amounts due to any Sub-Subcontractors, whether for labor performed or materials furnished, within ten (10) days after such Subcontractor receives a payment from the Contractor which encompasses labor or materials furnished by such Sub-Subcontractor and a provision requiring each Subcontractor to promptly give notice to the Contractor of any claim or demand by a Sub-subcontractor claiming that any amount is due to such Sub-Subcontractor or claiming any default by such Subcontractor in any of its obligations to such Sub-subcontractor which notice the Contractor shall promptly relay to the Owner.

## ARTICLE 12 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 12.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under conditions of the contract identical or substantially similar to these, including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such claim as provided in Article 21.

§ 12.2 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's activities with theirs as required by the Contract Documents.



**§ 12.3** The Owner shall be reimbursed by the Contractor for costs incurred by the Owner which are payable to a separate contractor because of delays, improperly timed activities or defective construction of the Contractor. The Owner shall be responsible to the Contractor for costs incurred by the Contractor because of delays, improperly timed activities, damage to the Work or defective construction of a separate contractor.

## **ARTICLE 13 CHANGES IN THE WORK**

**§ 13.1** By appropriate Modification, changes in the Work may be accomplished after execution of the Contract. The Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, with the Contract Sum and Contract Time being adjusted accordingly. Such changes in the Work shall be authorized by written Change Order on AIA Form G701-2001 and signed by the Owner, Contractor and Architect, or by written Construction Change Directive signed by the Owner and Architect.

**§ 13.2** Adjustments in the Contract Sum and Contract Time resulting from a change in the Work shall be determined by mutual agreement of the parties or, in the case of a Construction Change Directive signed only by the Owner and Architect, by the Contractor's cost of labor, material, equipment, and reasonable overhead and profit, unless the parties agree on another method for determining the cost or credit. Pending final determination of the total cost of a Construction Change Directive, the Contractor may request payment for Work completed pursuant to the Construction Change Directive. The Architect will make an interim determination of the amount of payment due for purposes of certifying the Contractor's monthly Application for Payment. When the Owner and Contractor agree on adjustments to the Contract Sum and Contract Time arising from a Construction Change Directive, the Architect will prepare a Change Order.

**§ 13.2.2** The Contractor shall provide evidence, reasonably satisfactory to the Owner, of any costs for which the Contractor seeks compensation or reimbursement pursuant to Section 13.2.

**§ 13.3** The Architect will have authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly.

**§ 13.4** If concealed or unknown physical conditions are encountered at the site that differ materially from those indicated in the Contract Documents or from those conditions ordinarily found to exist, the Contract Sum and Contract Time shall be equitably adjusted as mutually agreed between the Owner and Contractor; provided that the Contractor provides notice to the Owner and Architect promptly and before conditions are disturbed.

## **ARTICLE 14 TIME**

**§ 14.1** Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

**§ 14.2** Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

**§ 14.3** The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

**§ 14.4** The date of Substantial Completion is the date certified by the Architect in accordance with Section 15.4.3.

**§ 14.5** If the Contractor is delayed at any time in the commencement or progress of the Work by changes ordered in the Work, by labor disputes, fire, unusual delay in deliveries, abnormal adverse weather conditions not reasonably anticipatable, unavoidable casualties or any causes beyond the Contractor's control, or by other causes which the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine, subject to the provisions of Article 21.

## ARTICLE 15 PAYMENTS AND COMPLETION

### § 15.1 APPLICATIONS FOR PAYMENT

§ 15.1.1 Where the Contract is based on a Stipulated Sum or the Cost of the Work with a Guaranteed Maximum Price, the Contractor shall submit to the Architect, before the first Application for Payment, a schedule of values, allocating the entire Contract Sum to the various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used in reviewing the Contractor's Applications for Payment.

§ 15.1.2 Payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment stored, and protected from damage, off the site at a location agreed upon in writing.

§ 15.1.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall be free and clear of liens, claims, security interests or other encumbrances adverse to the Owner's interests. Provided that the Owner shall have paid to the Contractor all amounts properly due and owing under the Contract Documents, the Contractor shall indemnify and hold the Owner harmless from any liens, claims, security interests or encumbrances filed by the Contractor, any Subcontractor, Sub-subcontractor or anyone claiming by, through or under them.

§ 15.1.4 Applications for Payment must be submitted on AIA Form G702-1992.

### § 15.2 CERTIFICATES FOR PAYMENT

§ 15.2.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Section 15.2.3.

§ 15.2.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluations of the Work and the data comprising the Application for Payment, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 15.2.3 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 15.2.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 15.2.1. If the Contractor and the Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 9.2.2, because of

- .1 defective Work not remedied;

- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a separate contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 failure to carry out the Work in accordance with the Contract Documents.

§ 15.2.4 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 15.2.5 The Owner shall not be deemed to be in default by reason of withholding payment while any of the grounds described in Section 15.2.3 remained uncured or in the event the Owner withholds payment pursuant to Section 15.2.5, nor shall any interest accrue or be payable with respect to any payments so withheld.

### § 15.3 PROGRESS PAYMENTS

§ 15.3.1 The Contractor shall pay each Subcontractor, no later than ten (10) days after receipt of payment, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to sub-subcontractors in similar manner.

§ 15.3.2 Neither the Owner nor Architect shall have an obligation to pay or see to the payment of money to a Subcontractor except as may otherwise be required by law.

§ 15.3.3 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

### § 15.4 SUBSTANTIAL COMPLETION

§ 15.4.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 15.4.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 15.4.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. When the Architect determines that the Work or designated portion thereof is substantially complete, the Architect will issue a Certificate of Substantial Completion which shall establish the date of Substantial Completion, establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 15.4.4 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

## § 15.5 FINAL COMPLETION AND FINAL PAYMENT

§ 15.5.1 Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, including the completion of all punch list items to the satisfaction of the Owner, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions stated in Section 15.5.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 15.5.2 Final payment shall not become due until the Contractor has delivered to the Owner a complete release of all liens arising out of this Contract or receipts in full covering all labor, materials and equipment for which a lien could be filed, or a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including costs and reasonable attorneys' fees, unless such lien is a result of non-payment by the Owner for Work properly performed and resolution of the Contractor's claim is pending.

§ 15.5.3 The making of final payment shall constitute a waiver of claims by the Owner except those arising from

- .1 liens, claims, security interests or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents; or
- .3 terms of special warranties required by the Contract Documents.

§ 15.5.4 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

## ARTICLE 16 PROTECTION OF PERSONS AND PROPERTY

### § 16.1 SAFETY PRECAUTIONS AND PROGRAMS

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons and property and their protection from damage, injury or loss. The Contractor shall promptly remedy damage and loss to property caused in whole or in part by the Contractor, a Subcontractor, a sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 16.1.2 and 16.1.3, except for damage or loss attributable to acts or omissions of the Owner or Architect or by anyone for whose acts either of them may be liable, and not related to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 9.15.

### § 16.2 HAZARDOUS MATERIALS

§ 16.2.1 The Contractor is responsible for compliance with the requirements of the Contract Documents regarding hazardous materials. Except as otherwise provided by the Contract Documents, if the Contractor encounters a hazardous material or substance not addressed in the Contract Documents, and if reasonable precautions will be



inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately suspend Work in the affected area and report the condition to the Owner and Architect in writing. Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shutdown, delay and start-up.

**§ 16.2.3** If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

**§ 16.2.4** Except as otherwise set forth in the Contract Documents, the Contractor, when it will be providing, using, storing, delivering or disposing of any toxic, hazardous or potentially dangerous materials, shall advise in writing, and receive the written approval of, the Owner of the use of such hazardous materials in advance of conducting any Work and the Contractor is responsible for protecting its own employees, those of the Owner, and all of its employees and agents from the hazards associated with such materials. The Contractor shall furnish written directions, precautions or training, provided or made available from the supplier of the materials, or other acceptable source, for use by all persons who may be subjected to the hazard. In its performance of the Work, the Contractor shall comply with all applicable regulations and laws. The Contractor shall dispose of any hazardous or toxic substances in accordance with all applicable regulations or laws, including E.P.A. and D.O.T., and shall, as may be required by law, provide the Owner with the appropriate generator E.P.A. number. The Contractor shall perform all required procedures necessary to insure that there will be no discharge, spillage, uncontrolled loss, seepage or infiltration of any hazardous or toxic waste on the site caused by its operations. The Contractor is responsible for any and all costs and liabilities associated with the clean up of any such spillage, etc., or as required by regulating authorities having jurisdiction, and agrees to indemnify, defend, and hold the Owner and its employees and agents harmless against any current or future liabilities resulting from such incidents.

## **§ 16.3 PROTECTION OF THE WORK**

**§ 16.3.1** The Contractor shall at all times provide protection against weather (rain, wind, storms or heat) so as to maintain all Work, materials, apparatus and fixtures free from damage. At the end of the day's work, if applicable, all new Work likely to be damaged shall be reasonably protected against such weather.

**§ 16.3.2** The Contractor shall provide adequate fire protection for all operations associated with the Work, and such protection must meet all applicable federal (including OSHA), State and municipal regulations.

**§ 16.3.3** The Contractor shall be responsible, to the extent not covered by insurance, for damage, loss or liability due to theft or vandalism to the Work and stored materials when work is not in progress at night, on weekends or holidays.

**§ 16.3.4** The Contractor shall remove and replace with new work, at the Contractor's own expense, any Work damaged by failure to provide protection pursuant to this Section 16.3.

## **§ 16.4 SECURING THE SITE**

The Contractor is responsible securing, and preventing access by unauthorized individuals to, the Project Site from such date as the Contractor, its subcontractors, consultants, or agents commence the Work until, unless the Owner and Contractor agree to an earlier date in writing, the date of Final Completion.

## **ARTICLE 17 INSURANCE AND BONDS**

### **§ 17.1 The Contractors Insurance and Bonds.**

**§ 17.1.1** The Contractor shall purchase from, and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, insurance for protection from claims under workers' compensation acts and other employee benefit acts which are applicable, claims for damages because of bodily injury, including death, and claims for damages, other than to the Work itself, to property which may arise out of or

result from the Contractor's operations and completed operations under the Contract, whether such operations be by the Contractor or by a Subcontractor or anyone directly or indirectly employed by any of them. This insurance shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater, and shall include contractual liability insurance applicable to the Contractor's obligations under Section 9.15. Certificates of Insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work. Each policy shall contain a provision that the policy will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. The Contractor shall cause the commercial general liability coverage required by the Contract Documents to include: (1) the Owner, the Architect and the Architect's Consultants as additional insureds on a primary and non-contributing basis for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

**§ 17.1.2** The insurance required by Section 17.1.1 hereof shall include the policies listed in this Section 17.1.2, and shall be written for not less than the amounts specified in this Section 17.1.2, or greater if required by law.

See Exhibit A - Insurance Requirements.

**§ 17.1.3** The Contractor shall require its Subcontractors and Sub-subcontractors to maintain the same types of insurance the Contractor is required to maintain under the Contract Documents in coverage amounts approved by the Owner.

## **§ 17.2 OWNER'S LIABILITY INSURANCE**

The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

## **§ 17.3 PROPERTY INSURANCE**

**§ 17.3.1** Unless otherwise provided, and if applicable to the Project, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance on an "all-risk" or equivalent policy form, including builder's risk, in the amount of the initial Contract Sum, plus the value of subsequent modifications and cost of materials supplied and installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 15.5 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 17.3.1 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and sub-subcontractors in the Project.

**§ 17.3.2** If the applicable Owner shall file a copy of each policy with the Contractor before an exposure to loss may occur. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Contractor.

**§ 17.3.3** The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 12, if any, and any of their subcontractors, sub-subcontractors, agents and employees for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to Section 17.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 12, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

**§ 17.3.4** A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their sub-subcontractors in similar manner.

## **§ 17.4 PERFORMANCE BOND AND PAYMENT BOND**

**§ 17.4.1** The Contractor shall furnish a bond covering the faithful performance of the Contract. The amount of such bond shall be equal to one hundred percent (100%) of the Contract Sum. The Owner shall be shown as the obligee. The Contractor shall deliver the executed, approved bond to the Owner within one (1) business day after execution of this Contract.

**§ 17.4.2** Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

## **ARTICLE 18 CORRECTION OF WORK**

**§ 18.1** The Contractor shall promptly and at its sole expense correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense, unless compensable under Section A.2.7.3 in Exhibit A, Determination of the Cost of the Work.

**§ 18.2** In addition to the Contractor's obligations under Section 9.4, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 15.4.3, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty.

**§ 18.3** If the Contractor fails to correct nonconforming Work within a reasonable time, the Owner may correct it in accordance with Section 8.3.

**§ 18.4** The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

**§ 18.5** The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Article 18.

## **ARTICLE 19 MISCELLANEOUS PROVISIONS**

### **§ 19.1 ASSIGNMENT OF CONTRACT**

Neither party to the Contract shall assign the Contract without written consent of the other, except that the Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

**§ 19.2** The Contractor represents and warrants the following to the Owner (in addition to the other representations and warranties contained in the Contract Documents), as an inducement to the Owner to execute this Agreement, which representations and warranties shall survive the execution and delivery of this Agreement and the final completion of the Work:

- .1 that it is financially solvent, able to pay its debts as they mature and possessed of sufficient working capital to complete the Work and perform its obligations under the Contract Documents;
- .2 that it, through its Subcontractors or otherwise, is able to furnish the tools, materials, supplies, equipment and labor required to complete the Work and perform its obligations hereunder in a timely manner and has sufficient experience and competence to do so;
- .3 the Contractor is authorized to do business in the State of Connecticut and is properly licensed by all necessary governmental authorities having jurisdiction over the Contractor and the Project; and
- .4 the Contractor has visited the site of the Project and become familiar with the Contract Documents and the visible conditions of the site, and knows of no reason why the Work cannot be performed as set forth in the Contract Documents.

### **§ 19.3 GOVERNING LAW**

The Contract shall be governed by the law of the State of Connecticut.

### **§ 19.4 TESTS AND INSPECTIONS**

Tests, inspections and approvals of portions of the Work required by the Contract Documents or by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities shall be made at an appropriate time. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating the costs to the Contractor.

### **§ 19.5 COMMENCEMENT OF STATUTORY LIMITATION PERIOD**

The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in the Agreement within the period specified by applicable law.

**§ 19.6** If any provision of this Agreement or any other contracts among the Contract Documents is found to be invalid or illegal by a court of competent jurisdiction, the remaining provisions shall remain in full force and effect and the parties agree to substitute for the invalid provision the provision within the bounds of the law which most clearly effectuates the legal and economic intent of the invalid provision.

## **ARTICLE 20 TERMINATION OF THE CONTRACT**

### **§ 20.1 TERMINATION BY THE CONTRACTOR**

If the Architect fails to certify payment as provided in Section 15.2.1 for a period of 30 days through no fault of the Contractor, or if the Owner fails to make payment as provided in Section 4.1.3 for a period of 30 days, and, in either event, the withholding party has not notified the Contractor of the reason for withholding payment the Contractor may, upon seven additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner payment for Work executed, costs incurred by reason of such termination, and damages. Notwithstanding the foregoing the aforementioned notice of termination must state with specificity the means by which the Owner may cure its nonperformance, and the Contractor shall not terminate this Agreement if, within seven (7) business days of such notice, the Owner substantially takes such curative measures.

### **§ 20.2 TERMINATION BY THE OWNER FOR CAUSE**

**§ 20.2.1** The Owner may terminate the Contract if the Contractor

- .1 institutes proceedings or consents to proceedings requesting relief or arrangement under the Federal Bankruptcy Act or any similar or applicable Federal or state law, or if a petition under any Federal or state bankruptcy or insolvency law is filed against the Contractor and such petition is not dismissed within sixty (60) days from the date of said filing, or if the Contractor admits in writing its inability to pay its debts generally as they become due, or if it makes a general assignment for the benefit of its creditors, or if a receiver, liquidator, trustee or assignee is appointed on account of its bankruptcy or insolvency; or if a receiver of all or any substantial portion of the Contractor's properties is appointed;



- .2 abandons the Work; or if it fails, except in cases for which extension of time is provided, to prosecute promptly and diligently the Work;
- .3 fails to supply enough properly skilled workers or proper materials for the Work;
- .4 submits an Application for Payment, sworn statement, waiver of lien, affidavit or document of any nature whatsoever which is intentionally falsified;
- .5 fails to make payment to Subcontractors for materials or labor in accordance with the Contract Documents and the respective agreements between the Contractor and the Subcontractors;
- .6 disregards the Conditions, applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of an appropriate authority; or
- .7 otherwise is guilty of substantial breach of a provision of the Contract Documents; or
- .8 if a mechanic's or materialmen's lien or notice of lien is filed against any part of the Work or the site of the Project and not promptly bonded or insured over by the Contractor after the receipt of notice thereof in a manner reasonably satisfactory to the Owner.

**§ 20.2.2** When any of the above reasons exists, the Owner, upon certification by the Architect that sufficient cause exists to justify such action, may, without prejudice to any other remedy the Owner may have and after giving the Contractor seven days' written notice, terminate the Contract and take possession of the site and of all materials and equipment to be incorporated into the Project, thereon owned by the Contractor and may finish the Work by whatever reasonable method the Owner may deem expedient. Upon request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

**§ 20.2.3** When the Owner terminates the Contract for one of the reasons stated in Section 20.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

**§ 20.2.4** If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Architect, upon application, and this obligation for payment shall survive termination of the Contract.

## **§ 20.3 TERMINATION BY THE OWNER FOR CONVENIENCE**

The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause. The Contractor shall be entitled to receive payment for Work properly executed, and reasonable costs incurred by reason of such termination.

**§ 20.4** Upon any termination hereunder in a manner that requires payment from the Owner to the Contractor, the Owner shall be credited for (1) payment previously made to the Contractor for the terminated portion of the Work, (2) claims which the Owner has against the Contractor under the Contract, and (3) the value of the materials, supplies, equipment or other items that are to be disposed of by the Contractor that are part of the Contract Sum.

## **ARTICLE 21 CLAIMS AND DISPUTES**

**§ 21.1** Claims, disputes and other matters in question arising out of or relating to this Contract, including those alleging an error or omission by the Architect but excluding those arising under Section 16.2, shall be referred initially to the Architect for decision. Such matters, except those waived as provided for in Section 21.8 and Sections 15.5.3 and 15.5.4, shall, after initial decision by the Architect or 30 days after submission of the matter to the Architect, be subject to mediation as a condition precedent to binding dispute resolution.

**§ 21.2** If a claim, dispute or other matter in question relates to or is the subject of a mechanic's lien, the party asserting such matter may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

**§ 21.3** The parties shall endeavor to resolve their disputes by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with their Construction

Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to this Agreement, and filed with the person or entity administering the mediation. The request may be made concurrently with the binding dispute resolution but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

**§ 21.4** If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any claim, subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association, in accordance with the Construction Industry Arbitration Rules in effect on the date of this Agreement. Demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

**§ 21.5** Either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation; (2) the arbitrations to be consolidated substantially involve common questions of law or fact; and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

**§ 21.6** Any party to an arbitration may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of a Claim not described in the written Consent.

**§ 21.7** The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

This Agreement entered into as of the day and year first written above.

\_\_\_\_\_  
**OWNER** (Signature)

\_\_\_\_\_  
(Printed name and title)

\_\_\_\_\_  
**CONTRACTOR** (Signature)

\_\_\_\_\_  
(Printed name and title)

## **Exhibit A**

### **Contractors Insurance Requirements**

All Contractors are required to provide proof of the required insurance coverage before entering the premises or commencing any work at any ACES facility. Contractors must obtain, at their own expense, all the insurance required here from an insurance company A.M. Best rated as "A-VII" or better, and acceptable evidence of such insurance must be properly furnished to, and approved by, ACES.

All Contractors are subject to the same requirements. It is the responsibility of the primary contractor to obtain acceptable evidence of insurance from subcontractors.

**ACES, Gateway Community College and the State of Connecticut** also requires that they be named as an additional insured on the commercial general liability policy(ies). The commercial general liability policy must be specifically endorsed with ISO Endorsement CG 20 10 (or equivalent) *or* ISO Endorsement CG 20 26 (or equivalent), *and* ISO Endorsement CG 20 37 (or equivalent)." These form numbers must be specifically referenced on the certificate of insurance, and copies of these endorsements naming ACES as additional insured must be furnished with the required certificate of insurance prior to commencement of the work. If the insurance company uses a different form to provide ACES with an additional insured status on your policies, copies must be provided in advance with the insurance certificate for review and approval by ACES.

The amounts of insurance available to ACES and the above noted additional insureds must be equal to the full policy limits carried by the Contractor, including primary and excess (umbrella) liability policies or the amounts specified below, whichever is greater. Coverage provided under excess or umbrella policies must be at least as broad as that found in required underlying policies. All coverage must be primary and noncontributory as to ACES.

The proper name for the entity to be named as additional insured is: **"Area Cooperative Educational Services, and/or related or affiliated entities, Gateway Community College, State of Connecticut."**

Evidence of compliance with these requirements is with the ACCORD form 25, "Certificate of Liability Insurance", plus copies of any required additional insured endorsements. Certificates should be sent to:

Tim Gunn, Director of Facilities,  
Area Cooperative Educational Services,  
350 State Street,  
North Haven, CT 06473-3108

Current insurance certificates must be furnished to ACES at all times. Replacement certificates must be furnished ten (10) days *prior to the expiration or replacement* of referenced policies.

ACES reserves the right to make commercially reasonable changes in these requirements during the term of any work or project.

Types and Minimum Coverage Amounts	
<b>Commercial General Liability (“CGL”)</b>	<p>\$1,000,000 per occurrence  \$2,000,000 aggregate bodily injury/property damage  \$1,000,000 Personal and Advertising Injury  \$2,000,000 Products-Completed operations aggregate  The CGL policy must include coverage for:</p> <ul style="list-style-type: none"> <li>liability from premises and operations.</li> <li>liability from products or completed operations.</li> <li>liability from actions of independent contractors.</li> <li>liability assumed by contract.</li> </ul>
<b>Conditions</b>	<p>All coverage provided to ACES under this section must be primary and non-contributory with any other insurance available to ACES. ACES must be specifically named as “additional insured” on the CGL policy with ISO form CG 20 10 or CG 20 26 or equivalent acceptable to ACES. ACES must <i>also</i> be named as “additional insured” for Products/Completed Operations on the CGL policy with form CG 20 37 or equivalent acceptable to ACES.</p> <p>Any Aggregate limit must apply per job or project.</p> <p>Products/completed operations must be carried for two (2) years after completion of job/acceptance by ACES.</p>
<b>Automobile Liability</b>	<p>\$1,000,000 each accident  \$2,000,000 aggregate  for bodily injury/property damage, including hired owned &amp; non-owned vehicles.</p>
<b>Umbrella Liability</b>	<p>\$3,000,000  Limits must be excess over underlying limits described above. All coverage provided to ACES under this section must be at least as broad as that found in the underlying policies, and must be primary and non-contributory with any other insurance available to ACES.</p>
<b>Workers' Compensation</b>	<p>Liability meeting statutory limits by the State and Federal laws with minimum limits of:  \$1,000,000 each accident for bodily injury by accident  \$1,000,000 each employee for bodily injury by disease  \$1,000,000 policy limit for bodily injury by disease</p>
<b>Employers Liability</b>	<p>\$1,000,000  each accident</p>
<b>Professional Liability</b>	<p>\$1,000,000</p>
<b>Contractor’s Pollution Liability</b>	<p>\$1,000,000 per occurrence/\$1,000,000 aggregate</p>



## **Exhibit B**

### **Scope of Work**

<b>PROJECT:</b>	RESCUE WINDOW INSTALLATION at 88 BASSETT ROAD
<b>LOCATION:</b>	88 Bassett Road, North Haven, CT
<b>OWNER:</b>	ACES
<b>ARCHITECT</b>	SILVER/PETRUCELLI + ASSOCIATES, INC.
<b>DATE:</b>	March 3, 2020

---

#### **DESCRIPTION OF WORK TO BE PERFORMED:**

This Contractor shall provide for the furnishing and installation of **RESCUE WINDOW INSTALLATION at 88 Bassett Road** and related work necessary to achieve a complete and functional installation that reasonably meets the intent and requirements of the contract documents and is acceptable to the Owner. It is further understood that the project drawings and specifications provided may not be fully detailed, but such information can be reasonably inferred by similar details or requirements indicated elsewhere in the contract documents and that such cost is included in Contract/Bid Submission price.

#### **SPECIFICATIONS:**

In general, this Contractor shall include and provide all material, equipment and all things necessary to perform **RESCUE WINDOW INSTALLATION at 88 Bassett Road** and related Work per or reasonably implied by the Contract Documents including but not limited to all work in Specification sections:

All as listed in the Table of Contents

#### **MISCELLANEOUS SCOPE OF WORK TO BE INCLUDED:**

Without the intent of limiting the scope of work, this section contains additional scope clarifications that compliment the Contract Documents. The items listed herein are not intended to be a complete list of work items to be performed under this Subcontractors scope of work. Furthermore, details referenced are included for convenience but are not intended to identify all applicable details.

1. Rescue windows are to be installed in all classrooms and locations as indicated in the Contract Documents. It is estimated a total of forty-six (46) rescue windows will be required and installed in three (3) phases: Phase 1 – Sixteen (16) windows, Phase 2 – Fifteen (15) windows, Phase 3 – Fifteen (15) windows.
2. All Work is to be installed in Phases as noted above. Material is to be ordered by each phase. Phase 1 is to start this summer and material shall be ordered to make this timeframe. Material for Phases 2 and 3 must be authorized by Owner before purchasing. Contractor shall advise Architect and Owner at a minimum of at least three (3) weeks when he needs to place the order for material to meet each phase completion date. This is required to minimize Project cost if ACES does not proceed with the Work in Phases 2 and/or 3.
3. Per Article 20.3 the Owner may, at any time, terminate the Contract for the Owner's convenience and without cause. The Contractor shall be entitled to receive payment for Work properly executed, and reasonable costs incurred by reason of such termination.
4. All Work is to be performed by phases in the summer. Each Phase shall start after the last day of school and must be done before the start of School (third week of August).
5. Contractor has included any and all cost necessary to meet the Project Schedule dates and allow enough time for follow up work by others to be completed within the schedule dates.
6. Contractor has included the required manpower, labor, cost for overtime, shift work and/or premium time to perform utility tie-ins, phasing relating work and any work not allowed by the Owner during normal working hours.

7. Contractor must refer to Exhibit C – ACES School Calendars. During School Break, Summer School will be in session. Contractor can only work off hours during this time. On Holidays and weekends, Contractor can work at ACES Facilities between the hours of 7am and 5pm Monday through Friday. Additional hours must be coordinated and approved by ACES Facilities.
8. Contractor shall perform this work in a manner to minimize the disruption to School activities. All Work that will impact the school shall be performed after school hours (starting at 3:00 p.m.). No material can be stored in the school during school hours or when students are in the building.
9. The Contractor shall propose a construction schedule for the Owner's review and acceptance indicating the duration and order of Work for each room and for each school and overall.
10. Contractor shall keep its work area broom clean, install dust protection, must not store any materials or tools in hallways or allow access to these items by the Students.
11. Contractor is to store material off site or coordinate with the Owner for an on-site storage container.
12. Contractor to refer to all Division 01 specifications for additional requirements. Note Summary of Work section in particular for additional Scope items.

**INCLUSIONS:**

**EXCLUSIONS:**

1. None.

**CLARIFICATIONS:**

---

**I have reviewed the above Exhibit B and I am in agreement with all items and have included provisions in Bid Submission/Contract Price.**

CONTRACTOR:

\_\_\_\_\_  
NAME

BY:

\_\_\_\_\_  
SIGNATURE

NAME:

\_\_\_\_\_  
PRINT

TITLE:

\_\_\_\_\_

DATE:

\_\_\_\_\_

**Exhibit C**  
**ACES School Calendars**

# ACES WIMS Calendar: 2019-2020

July				
M	T	W	TH	F
1	2	3	[4]	5
8	9	10	11	12
15	16	17	18	19
22	23	24	25	26
29	30	31		

August (2/0)				
M	T	W	TH	F
			1	2
5	6	7	8	9
12	13	14	15	16
19	20	21	22	23
26	27	28	29	30

September (19/18)				
M	T	W	TH	F
[2]	3	4H*	5H*	6H*
9	10	11	12	13
16	17	18	19	20
23	24	25	26	27
30				

October (21/21)				
M	T	W	TH	F
	1	2	3	4
7	8	9	10	11
[14]	15	16	17	18
21	22	23	24	25
28	29	30	31	

November (18/17)				
M	T	W	TH	F
				1
4	5	6	7	8
[11]	12	13	14	15
18	19	20	21	22
25	26	27*	28	[29]

December (15/15)				
M	T	W	TH	F
2	3	4	5	6T
9	10	11	12	13
16	17A*	18A*	19A*	20*
23	[24]	[25]	26	27
30	[31]			

January (21/20)				
M	T	W	TH	F
		[1]	2M	3
6	7	8	9	10
13	14	15	16	17
[20]	21	22	23	24
27	28	29	30	31

February (18/18)				
M	T	W	TH	F
3	4	5	6	7
10	11	12	13	14
[17]	18	19	20	21
24	25	26	27	28

March (22/21)				
M	T	W	TH	F
2	3	4	5	6
9	10	11	12	13
16	17	18	19T	20
23	24	25	26	27
30	31A*			

April (16/16)				
M	T	W	TH	F
		1A*	2A*	3M
6	7	8	9	[10]
13	14	15	16	17
20	21	22	23	24
27	28	29	30	

May (20/20)				
M	T	W	TH	F
				1
4	5	6	7	8
11	12	13	14	15
18	19	20	21	22
[25]	26	27	28	29

June (14/14)				
M	T	W	TH	F
1	2	3	4	5
8	9	10	11	12
15	16	17	18T*	19
22	23	24	25	26
29	30			

Date/Event or Holiday	
July 4, 2019	Independence Day
August 29-30, Sept 3, 2019	PD Days (no school)
September 2, 2019	Labor Day
September 4, 2019	First Day for Students
September 30, 2019	Rosh Hashanah
October 9, 2019	Yom Kippur
October 14, 2019	Columbus Day
November 5, 2019	PD Day (no school)
November 11, 2019	Veterans Day
November 28-29, 2019	Thanksgiving
Dec. 17-19, Jan. 2, 2019	Parent Conferences
December 20, 2019	Early Dismissal
December 23-Jan 1, 2020	Holiday Recess
January 17, 2020	PD Day (no school)
January 20, 2020	Martin Luther King Day
February 17, 2020	President's Day
February 17-18, 2020	February Recess
March 20, 2020	PD Day (no school)
March 31, April 1-3	Parent Conferences
April 10, 2020	Good Friday
April 13-17, 2020	April Recess
May 25, 2020	Memorial Day
June 18, 2020	Early Dismissal
June 18, 2020	Last Day of School
[ ] Agency Closed	* Early Dismissal
Schools Closed Only	T= End of Trimester
H= Hopes and Dreams Conferences	
A = Afternoon Parent Conferences	
M = Parent Conferences Make-up	

RESCUE WINDOW INSTALLATION

**88 BASSETT ROAD**  
**NORTH HAVEN, CT 06473**

S/P+A PROJECT NO. 19.126

<u>Drawing Number</u>	<u>Drawing Name</u>
	COVER SHEET
A1	FIRST FLOOR DEMOLITION PLAN & FLOOR PLAN
A2	EXTERIOR ELEVATIONS, WINDOW TYPES & DETAILS

END OF DRAWING LIST



SECTION 011000 - SUMMARY OF WORK

PART 1 - GENERAL

1.1 PROJECT DESCRIPTION

- A. Project Identification: The project consists of rescue window installation.
  - 1. Project Location: Wintergreen Magnet School, 88 Bassett Road, North Haven, CT 06473
  - 2. Owner: Area Cooperative Educational Services (“ACES”)
  - 3. Architect: Silver/Petrucelli + Associates, 3190 Whitney Avenue, Building 2, Hamden, CT 06518.
- B. Work Included: The scope of work for this project generally includes, but is not limited to, the following major elements:
  - 1. Removal of building materials and components.
  - 2. Offsite disposal of all removed materials.
  - 3. Provision and installation of rescue windows in all classrooms and locations indicated on the Contract Drawings with all associated components, glazing, and sealants.
- C. Schedule: All Work shall be performed during summer break. See attached school calendar as an example. Contractors shall take all precautions not to interfere with school activities.
- D. Contractor shall protect Work until accepted by ACES.
- E. Contract shall obey all local ordinances including but not limited to Work hours and noise requirements.

1.2 CONTRACTOR USE OF PREMISES

- A. Contractor shall coordinate its’ Work activities with the Owner on a daily basis and advise the Owner of its scheduled activities two (2) weeks in advance.
- B. General: Limit use of the premises to construction activities in areas indicated; allow for Owner Occupancy and use by the public to the remainder of the building. Do not disturb portions of site beyond areas in which the Work is indicated.
- C. Confine operations to as small work area and access ways as possible. As much as possible and without damage to the finishes, doors, and related building systems, access the project via the service doors designated by the Owner.
- D. Keep driveways and entrances serving the premises clear and available to the Owner, Owner’s employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site.
  - 1. Schedule deliveries not to conflict with Owner’s use of driveways and entrances. Contractor shall give ACES a minimum 48-hour notice in writing. Contractor shall not

interfere with the transportation of ACES students. No deliveries shall occur during student drop off and pick-up.

2. Contractor shall only Park in designated location as directed by ACES.

- E. Shall maintain existing egress patterns, exit doors and means of egress during construction, which will include the provision of temporary walkways, sideways, or other means necessary to provide adequate life safety for the building occupants, particularly at exit ways which must continue to remain open and serviceable while adjacent construction activity occurs.
- F. Use of the Existing Building: Maintain the existing building in a weather tight condition throughout the construction period. Repair damage caused by construction operations. Take all precautions necessary to protect the building and its occupants during the construction period. Keep the facility (building and grounds) clean on a daily basis. Perform a final cleaning of Work area(s) and adjacent areas effected by Contractor's Work activities. Repair any damage to the facility caused by Contractor's Work activities, including but not limited to landscaping, roads and curbs, lighting, etc.
- G. Contractor shall at its expense make all permanent connections and tie-ins during time that will not affect the operations of the school.

#### 1.3 OWNER OCCUPANCY

- A. Full Owner Occupancy: The Owner will occupy the site and existing building during the entire construction period. Cooperate with the Owner during construction operations to minimize conflicts and facilitate owner usage. Pre-schedule construction operations with the Owner for coordination of demolition operations and the location of dumpsters and construction staging areas. Perform the Work so as not to interfere with the Owner's operations. Contractor's use of premises is limited only by Owner's right to perform work or to retain other contractors on portions of Project.
- B. Contractor shall supply all temporary ventilation and prevent unnecessary noise. Contractor shall take precautions to minimize the impact of its operation on the school. Contractor agrees to perform work that interferes with the school during off hours or weekends and holidays at no additional cost to ACES.

#### 1.4 SPECIFICATION FORMATS AND CONVENTIONS

- A. Section Identification: The Specifications use section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of sections in the Contract Documents.
- B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
  - 1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.



2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
3. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
4. Drawings and General Provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to all Sections of these Specifications.

#### 1.5 TYPE OF CONTRACT

- A. Project will be constructed under a single prime contract.
- B. Contractor Qualifications: An experienced general contractor with a minimum of eight (8) years of experience in interior construction and associated Work. In addition, the Contractor must prove experience in similar type and monetary value. Contractor must have sufficient resources to perform the specified Work concurrently at all schools while meeting the project deadlines. Contractors that cannot comply with these qualifications will not be considered for the project.

#### 1.6 WORK SCHEDULES

- A. All work shall be completed **on or before the third (3<sup>rd</sup>) week of August of each phasing year.** Coordinate all work and exact dates with the ACES Facilities Department.
- B. Contractor shall coordinate its Work and schedule activities with the ACES facilities calendar. Unless given written permission by ACES Facilities Department, no Work activities by the Contractor shall be performed during the following ACES activities: Field Day, Graduation Ceremony, and Special Events (ACES will give the Contractor five (5) day notice of such events).
  1. Contractor must refer to Exhibit C – ACES School Calendar and Exhibit B – Scope of Work.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 011000



SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Sections:
  - 1. Section 016000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.
  - 2. Divisions 02 through 49 Sections for specific requirements and limitations for substitutions.

1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
  - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
  - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 SUBMITTALS

- A. Substitution Requests: Submit three (3) copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  - 1. Substitution Request Form: Use **CSI Form 1.5C, 13.1A** or comparable form.
  - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
    - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
    - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
    - c. Detailed, SIDE-BY-SIDE comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable specification section. Significant qualities may include attributes such

- as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
  - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
  - e. Samples, where applicable or requested.
  - f. Certificates and qualification data, where applicable or requested.
  - g. List of similar installations for completed projects with project names and addresses and names and addresses of Architects and Owners.
  - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
  - i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
  - j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
  - k. Cost information, including a proposal of change, if any, in the Contract Sum.
  - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
  - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven (7) days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within fifteen (15) days of receipt of request, or seven (7) days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
  - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

## 1.5 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage qualified testing agency to perform compatibility tests recommended by manufacturers.

## 1.6 PROCEDURES

- A. Coordination: Modify or adjust affected work as necessary to integrate work of the approved substitutions.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Procurement Substitution Request: Submit to Architect seven (7) days prior to date of bid opening.
- B. Substitutions for Cause: Submit requests for substitution immediately upon discovery of need for change, but not later than fifteen (15) days prior to time required for preparation and review of related submittals.
  - 1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
    - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
    - b. Substitution request is fully documented and properly submitted.
    - c. Requested substitution will not adversely affect Contractor's construction schedule.
    - d. Requested substitution has received necessary approvals of authorities having jurisdiction.
    - e. Requested substitution is compatible with other portions of the Work.
    - f. Requested substitution has been coordinated with other portions of the Work.
    - g. Requested substitution provides specified warranty.
    - h. If requested substitution involves more than one (1) contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- C. Substitutions for Convenience: Architect will consider requests for substitution if received within sixty (60) days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Architect.
  - 1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
    - a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
    - b. Requested substitution does not require extensive revisions to the Contract Documents.
    - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
    - d. Substitution request is fully documented and properly submitted.
    - e. Requested substitution will not adversely affect Contractor's construction schedule.

- f. Requested substitution has received necessary approvals of authorities having jurisdiction.
- g. Requested substitution is compatible with other portions of the Work.
- h. Requested substitution has been coordinated with other portions of the Work.
- i. Requested substitution provides specified warranty.
- j. If requested substitution involves more than one (1) contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.

1.2 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

1.3 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
  - 1. Proposal Requests are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
  - 2. Within ten (10) calendar days after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
    - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    - c. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor shall immediately submit a Request for Information (RFI) to the Architect and a copy to ACES. If the Architect concurs in writing, the Contractor shall submit a Proposal Request to the Architect and a copy to ACES. The Proposal Request shall include the following minimum information:
  - 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
  - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.

3. Cost Proposals shall be in a format acceptable to ACES. Cost shall be broken out for Labor and Material. If requested by ACES, Contractors shall use the State of Connecticut change order form.
4. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
5. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Section 016000 "Product Requirements" if the proposed change requires substitution of one (1) product or system for product or system specified.

#### 1.4 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Proposal Request, Architect will issue a Change Order for signatures of Owner, Contractor and Architect.

#### 1.5 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
  1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
  1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 012600



## SECTION 012900 - PAYMENT PROCEDURES

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections include the following:
  - 1. Section 012600 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.

#### 1.2 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

#### 1.3 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with the following:
  - 1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
    - a. Application for Payment forms with Continuation Sheets.
    - b. Submittals Schedule.
  - 2. Submit the Schedule of Values to Architect for approval at earliest possible date but no later than fifteen (15) days before the date scheduled for submittal of initial Applications for Payment.
- B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one (1) line item for each Specification Section. These values are to be broken down by Material and Labor and by area and phase if applicable to project. Contractor shall also include specific line items for the following items: Bond, Insurance, Submittals, Project Schedule and Updates, and Close-out. Mobilization and de-mobilization line items are not allowable.
  - 1. Identification: Include the following Project identification on the Schedule of Values:
    - a. Project name and location.
    - b. Name of Architect.
    - c. Architect's project number.
    - d. Contractor's name and address.
    - e. Date of submittal.

2. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
  - a. Related Specification Section or Division.
  - b. Description of the Work.
  - c. Name of subcontractor.
  - d. Name of manufacturer or fabricator.
  - e. Name of supplier.
  - f. Change Orders (numbers) that affect value.
  - g. Dollar value.
  - h. Percentage of the Contract Sum to nearest one percent, adjusted to total one hundred percent (100%).
3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.
4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
5. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
  - a. Differentiate between items stored on-site and items stored off-site. Include evidence of insurance or bonded warehousing if required per ACES requirements.
6. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
7. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
  - a. Per ACES direction, temporary facilities and other major cost items that are not direct cost of actual work in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense.
8. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

#### 1.4 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
  1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction Work covered by each Application for Payment is the period indicated in the Agreement.

- C. Payment Application Forms: Use AIA Document G702 and AIA Document G703 Continuation Sheets as form for Applications for Payment.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
  - 1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
  - 2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- E. Transmittal: Submit four (4) signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One (1) copy shall include waivers of lien, certified payroll, OSHA certification and similar attachments as required.
  - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- F. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's liens from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.
  - 1. Submit partial waivers on each item for amount requested, before deduction for retainage, on each item.
  - 2. When an application shows completion of an item, submit final or full waivers.
    - a. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
  - 3. Waiver Forms: Submit waivers of lien on ACES forms, executed by an officer of the company or authorized Contractor representative.
- G. Until the Contract Agreement is executed by both parties and all insurance and bond requirements are met by the Contractor, the Owner cannot accept and/or process any progress payments by the Contractor. However, commencement of Work by the Contractor shall constitute acceptance of the Owners Agreement, including all terms and conditions.
- H. Contractors requisition shall include a statement indicating the Contractors original contract value, status of contract value to date, value of fully executed Change Orders, percent complete of fully executed change order work, value and status of pending change order work. Note: Pending Change Order is defined as Work that this Contractor has been directed to proceed with in writing by the Owner. This statement shall also include the date such Change Orders and directives were issued to this Contractor, the date this Contractor submitted its pricing back to the Owner, a description of the Change Order and a column for pertinent comments. This statement shall be in a format acceptable to the Owner. Be advised that the accuracy of the information contained in this statement is the Contractor's responsibility. Submission of this statement to the Owner does not constitute acceptance or approval by the Owner.

- I. In the event Contractor elects to include values for materials that are either stored on the project site or stored off site, the value for the Stored Materials must be separated and entered on the Continuation Sheet. In addition, the application to the Owner for such stored materials will only be made after the Owner has authorized such and the following has been submitted:
  - 1. Proof of purchase including the price paid and payment for the materials.
  - 2. Final Release from the vendor(s) supplying such materials.
  - 3. Bill of Sale to the Owner.
  - 4. A separate endorsement insuring the stored materials for their full value, which also names the Owner as an additional insured.
- J. If the Owner's Builder's Risk insurance contains Builders Risk Deductibles, this Contractor shall be responsible to pay said deductibles should the Contractor, its agents and/or employees' negligence be responsible for the compensable loss. In addition, the Contractor will insure, make known to and make a part of all sub-contractor's agreements for the Project that each will be responsible for and pay the Owner's Builder's Risk insurance deductibles should the Contractor or sub-contractor or their agents and/or employees' negligence be responsible for the compensable loss. **The value of this deductible is \$ 0.00.**
- K. Contractor shall submit their Schedule of Values to the Architect and the Owner **no later than fifteen (15) working days prior to its first requisition for Approval**. The Schedule of Values shall be in the format as required by the Contract Documents and as acceptable to the Architect and Owner. Contractor agrees to include all contract allowances and line items with a sufficient dollar value for the following items: Line item Labor and Material breakdown, Submittals, Scheduling, Safety, Clean up, Punch List, Close out Documents. Mobilization shall not be a line item, unless specifically allowed and approved. Contractor agrees to adhere to this requirement and that payment to this Contractor may not be processed, or payment withheld until Contractor complies.
- L. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
  - 1. List of subcontractors.
  - 2. Schedule of Values.
  - 3. Contractor's Construction Schedule (preliminary if not final).
  - 4. Products list.
  - 5. Schedule of unit prices.
  - 6. Submittals Schedule (preliminary if not final).
  - 7. List of Contractor's staff assignments.
  - 8. List of Contractor's principal consultants.
  - 9. Copies of building permits.
  - 10. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
  - 11. Initial progress report.
  - 12. Report of preconstruction conference.
  - 13. Certificates of insurance and insurance policies.
  - 14. Certified Payroll
  - 15. OSHA Certifications

- M. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing one hundred percent (100%) completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
  2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- N. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
  2. All Warranties and Guarantees
  3. All O& M Manuals
  4. Letter from Contractor certifying that no Hazardous material were used in the materials of construction including but not limited to Asbestos, PCB's, Lead.
  5. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
  6. Updated final statement, accounting for final changes to the Contract Sum.
  7. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
  8. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
  9. AIA Document G707, "Consent of Surety to Final Payment."
  10. Evidence that any and all claims have been settled.
  11. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
  12. Final, liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 012900



SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
  - 1. General project coordination procedures.
  - 2. Coordination Drawings.
  - 3. Administrative and supervisory personnel.
  - 4. Project meetings.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
  - 1. Section 017700 "Closeout Procedures" for coordinating Contract closeout.

1.2 COORDINATION

- A. Coordination: Each contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. Each contractor shall coordinate its operations with operations, included in different Sections, which depend on each other for proper installation, connection, and operation.
  - 1. Schedule construction operations in sequence required to obtain the best results where installation of one (1) part of the Work depends on installation of other components, before or after its own installation.
  - 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
  - 3. Coordinate the installation and removal of building systems to ensure uninterrupted system integrity.
  - 4. Make adequate provisions to accommodate items scheduled for later installation.
- B. If necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
  - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
  - 1. Preparation of Contractor's Construction Schedule.
  - 2. Prepare weekly, a two-week look-ahead schedule
  - 3. Preparation of the Schedule of Values.

4. Installation and removal of temporary facilities and controls.
5. Delivery and processing of submittals and Request for Information.
6. Progress meetings.
7. Monthly progress report.
8. Digital progress photos (a minimum of eight (8) photos per week).
9. Preinstallation conferences.
10. Project closeout activities.

### 1.3 SUBMITTALS

- A. Coordination Drawings: Prepare Coordination Drawings if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities.
  1. Indicate relationship of components shown on separate Shop Drawings.
  2. Indicate required installation sequences.
- B. Contact Information:
  1. Within seven (7) days of starting construction operations, submit a list of principal staff assignments, including superintendent and other personnel in attendance at Project site and individuals assigned as standbys in the absence of individuals assigned to Project.
  2. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including cell, office telephone numbers and email address.
  3. Provide names, addresses, description/responsibilities, cell number, office telephone numbers and email address for all Contractor's Consultants, Subcontractors and Vendors.
  4. Provide ACES with Emergency Contact information to reach Contractor's essential personnel 24/7 in case of an emergency.

### 1.4 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

- A. General: In addition to Project superintendent, provide other administrative and supervisory personnel as required for proper performance of the Work.
  1. Include special personnel required for coordination of operations with other contractors.

### 1.5 PROJECT MEETINGS

- A. General: The Contractor shall schedule and conduct meetings and conferences at the Project site, unless otherwise indicated or instructed by ACES.
  1. Attendees: The Contractor shall inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. The Contractor shall notify Owner, Subcontractor(s) and Architect of scheduled meeting dates and times. Meetings shall occur weekly while the Contractor is on site.
  2. Agenda: The Contractor shall prepare the meeting agenda and distribute the agenda to all invited attendees.
  3. Minutes: The Contractor shall record significant discussions and agreements achieved, and distribute the meeting minutes to everyone concerned, including Owner and Architect, within three (3) days of the meeting.



- B. Preconstruction Conference: The Contractor shall schedule a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than ten (10) days after execution of the Agreement. The conference shall be held at the Project site, ACES office or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.
1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; manufacturers; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
  2. Agenda: Discuss items of significance that could affect progress, including the following:
    - a. Designation of responsible personnel.
    - b. Distribution of the Contract Documents.
    - c. Construction Schedule.
    - d. Two-Week Look Ahead scheduling
    - e. Phasing.
    - f. Critical work sequencing.
    - g. Submittal and RFI procedures.
    - h. Procedures for processing field decisions and Change Orders.
    - i. Procedures for processing Applications for Payment.
    - j. Responsibility for temporary facilities and controls.
    - k. Use of the premises and Working hours.
    - l. Parking availability.
    - m. Site Logistics: Field Office, Work, Traffic and Storage Areas.
    - n. Equipment deliveries and priorities.
    - o. Security.
    - p. Safety
    - q. Progress cleaning.
    - r. Preparation of Record Documents
- C. Progress and Coordination Meetings: The Contractor shall conduct progress and coordination meetings at weekly intervals. Coordinate dates of meetings with preparation of payment requests.
1. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work
  2. Agenda: Review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
    - a. Combined Contractor's Construction Schedule: Review progress since the last coordination meeting. Determine whether each contract is on time, ahead of schedule, or behind schedule, in relation to Combined Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

- b. Schedule Updating: Revise Combined Contractor's Construction Schedule after each coordination meeting where revisions to the schedule have been made or recognized. Contractor shall update its project schedule and submit it to the Architect and ACES no later than the 10<sup>th</sup> of each month or with its monthly requisition, whichever is sooner.
  - c. Review present and future needs of each contractor present, including the following:
    - 1) Interface requirements.
    - 2) Sequence of operations.
    - 3) Status of submittals.
    - 4) Deliveries.
    - 5) Off-site fabrication.
    - 6) Access.
    - 7) Site utilization.
    - 8) Temporary facilities and controls.
    - 9) Work hours.
    - 10) Hazards and risks.
    - 11) Progress cleaning.
    - 12) Quality and work standards.
    - 13) Change Orders.
3. Reporting: The Contractor shall record and distribute minutes of the meeting to each party present and to parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 013100

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other miscellaneous submittals.
- B. Related Sections include the following:
  - 1. Section 012900 "Payment Procedures" for submitting Applications for Payment.
  - 2. Section 014000 "Quality Requirements" for submitting test and inspection reports and Delegated-Design Submittals.
  - 3. Section 017700 "Closeout Procedures" for submitting warranties, Project Record Documents and operation and maintenance manuals.
- C. Contractor shall provide ACES an electronic PDF copy of all its submittals on a flash drive. Contractor shall transmit partial information to ACES on a monthly basis no later than the 10<sup>th</sup> of each month. If requested Contractor shall also forward at the conclusion of the project a complete electronic PDF copy of all submittals.

1.2 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires Architect's responsive action.
- B. Informational Submittals: Written information that does not require Architect's approval. Submittals may be rejected for not complying with requirements.

1.3 SUBMITTAL PROCEDURES

- A. Architect's Digital Data Files: Electronic copies of CAD Drawings of the Contract Drawings will **not** be provided by Architect for Contractor's use in preparing submittals unless requested and Architect's user agreement properly completed.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
  - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
    - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Submittals Schedule: Contractor shall submit a Submittals Schedule. The Submittal Schedule shall be in a format acceptable to the Architect and Owner.

- D. Processing Time: Allow enough time for submittal review, including time for re-submittals, as follows. Time for review shall commence on Architect's receipt of submittal.
1. Initial Review: Allow fifteen (15) days for initial review of each submittal. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
  2. Concurrent Review: Where concurrent review of submittals by Architect's consultants, Owner, or other parties is required, allow twenty-one (21) days for initial review of each submittal.
    - a. Concurrent submittals include, but are not limited to, Structural, Mechanical and Electrical submittals.
  3. If intermediate submittal is necessary, process it in same manner as initial submittal.
  4. Allow fifteen (15) days for processing each re-submittal.
  5. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing.
- E. Place a permanent label or title block on each submittal for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
  2. Provide a space approximately 4 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
  3. Include the following information on label for processing and recording action taken:
    - a. Project name.
    - b. Date.
    - c. Name and address of Contractor.
    - d. Name and address of subcontractor.
    - e. Name and address of supplier.
    - f. Name of manufacturer.
    - g. Unique identifier, including revision number.
    - h. Number and title of appropriate Specification Section.
    - i. Drawing number and detail references, as appropriate.
    - j. Other necessary identification.
- F. Deviations: Highlight, encircle, or otherwise identify deviations from the Contract Documents on submittals.
- G. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals, without review received from sources other than Contractor.
1. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements of the Contract Documents, including minor variations and limitations. Include the same label information as the related submittal.
  2. Include Contractor's certification stating that information submitted complies with requirements of the Contract Documents.

- H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction (AHJ), and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- I. Use for Construction: Use only final submittals with mark indicating action taken by Architect in connection with construction.

## PART 2 - PRODUCTS

### 2.1 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
  - 1. Number of Copies: Submit six (6) copies of each submittal, unless otherwise indicated. Architect may retain two (2) copies; remainder will be returned to the Contractor. Mark up and retain one (1) returned copy as a Project Record Document.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
  - 1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
  - 2. Mark each copy of each submittal to show which products and options are applicable.
  - 3. Include the following information, as applicable:
    - a. Manufacturer's written recommendations.
    - b. Manufacturer's product specifications.
    - c. Manufacturer's installation instructions.
    - d. Color charts.
    - e. Manufacturer's catalog cuts.
    - f. Printed performance curves.
    - g. Operational range diagrams.
    - h. Mill reports.
    - i. Standard product operating and maintenance manuals.
    - j. Compliance with recognized trade association standards.
    - k. Compliance with recognized testing agency standards.
    - l. Application of testing agency labels and seals.
    - m. Notation of coordination requirements.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
  - 1. Preparation: Include the following information, as applicable:
    - a. Dimensions.
    - b. Identification of products.
    - c. Fabrication and installation drawings.
    - d. Roughing-in and setting diagrams.
    - e. Shopwork manufacturing instructions.
    - f. Templates and patterns.

- g. Schedules.
  - h. Design calculations.
  - i. Compliance with specified standards.
  - j. Notation of coordination requirements.
  - k. Notation of dimensions established by field measurement.
- 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8½ by 11 inches but no larger than 30 by 42 inches.
- D. Coordination Drawings: Comply with requirements in Section 013100 "Project Management and Coordination."
- E. Samples: Prepare physical units of materials or products, including the following:
  - 1. Comply with requirements in Section 014000 "Quality Requirements" for mockups.
  - 2. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
  - 3. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from the same material to be used for the Work, cured and finished in manner specified, and physically identical with the product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
  - 4. Preparation: Mount, display, or package Samples in manner specified to facilitate review of qualities indicated. Prepare Samples to match Architect's sample where so indicated. Attach label on unexposed side that includes the following:
    - a. Generic description of Sample.
    - b. Product name or name of manufacturer.
    - c. Sample source.
  - 5. Submit Samples for review of kind, color, pattern, and texture for a final check of these characteristics with other elements and for a comparison of these characteristics between final submittal and actual component as delivered and installed.
    - a. If variation in color, pattern, texture, or other characteristic is inherent in the product represented by a Sample, submit at least three sets of paired units that show approximate limits of the variations.
    - b. Refer to individual Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation, and similar construction characteristics.
  - 6. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
- F. Product Schedule or List: Prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
  - 1. Type of product. Include unique identifier for each product.

2. Number and name of room or space.
  3. Location within room or space.
- G. Delegated-Design Submittal: Comply with requirements in Section 014000 "Quality Requirements."
- H. Contractor's Construction Schedule: Submit within ten (10) days from the Notice to Proceed date. Contractor's schedule shall be in a format acceptable to the Architect and Owner. Contractor shall update the schedule on a regular bases or as requested by the Architect or Owner.
- I. Application for Payment: Comply with requirements in Section 012900 "Payment Procedures."
- J. Schedule of Values: Comply with requirements in Section 012900 "Payment Procedures."
- K. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
1. Name, address, and telephone number of entity performing subcontract or supplying products.
  2. Number and title of related Specification Section(s) covered by subcontract.
  3. Drawing number and detail references, as appropriate, covered by subcontract.

## 2.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
1. Number of Copies: Submit four (4) copies of each submittal, unless otherwise indicated. Architect will not return copies.
  2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
  3. Test and Inspection Reports: Comply with requirements in Section 014000 "Quality Requirements."
- B. Contractor's Construction Schedule: Submit Contractor's two-week look-ahead schedule. Schedule shall be distributed weekly to Architect and Owner.
- C. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- D. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements.
- E. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements and, where required, is authorized for this specific Project.
- F. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements. Include evidence of manufacturing experience where required.

- G. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements.
- H. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements.
- I. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- J. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements.
- K. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:
  - 1. Preparation of substrates.
  - 2. Required substrate tolerances.
  - 3. Sequence of installation or erection.
  - 4. Required installation tolerances.
  - 5. Required adjustments.
  - 6. Recommendations for cleaning and protection.
  - 7. Other required items indicated in individual Specification Sections.
- L. Provide MSDS and SDS on all material being installed. The Contractor shall verify and certify in writing to ACES that no hazardous material has been utilized in the construction of this facility.

### PART 3 - EXECUTION

#### 3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Contractor's Approval Stamp: Contractor shall stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

#### 3.2 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.



- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect and Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken.
  - 1. Architect shall stamp submittals “No Exceptions Taken,” “Furnish as Corrected,” “Revise and Resubmit,” or “Rejected.”
  - 2. In any submittal that is noted “No Exceptions Taken”, or “Furnish as Corrected,” the review shall not extend to details or dimensions and shall not relieve the Contractor from his responsibility for compliance with the Contract Drawings and Specifications.
- C. Informational Submittals: Architect will review each submittal and will not return it, or will reject and return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Submittals not required by the Contract Documents will not be reviewed and may be discarded.

END OF SECTION 013300



SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
  - 1. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
  - 2. Specified tests, inspections, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with the Contract Document requirements.
  - 3. Requirements for Contractor to provide quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections include the following:
  - 1. Section 017310 "Cutting and Patching" for repair and restoration of construction disturbed by testing and inspecting activities.
  - 2. Divisions 02 through 49 Sections for specific test and inspection requirements.

1.2 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and ensure that proposed construction complies with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that completed construction complies with requirements. Services do not include contract enforcement activities performed by Architect.
- C. Mock-ups: Full-size, physical example assemblies to illustrate finishes and materials. Mockups are used to verify selections made under Sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not Samples.
- D. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

1.3 DELEGATED DESIGN

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

#### 1.4 SUBMITTALS

- A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.
- C. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
  1. Specification Section number and title.
  2. Description of test and inspection.
  3. Identification of applicable standards.
  4. Identification of test and inspection methods.
  5. Number of tests and inspections required.
  6. Entity responsible for performing tests and inspections.
- D. Reports: Prepare and submit certified written reports that include the following:
  1. Date of issue.
  2. Project title and number.
  3. Name, address, and telephone number of testing agency.
  4. Dates and locations of samples and tests or inspections.
  5. Names of individuals making tests and inspections.
  6. Description of the Work and test and inspection method.
  7. Identification of product and Specification Section.
  8. Complete test or inspection data.
  9. Test and inspection results and an interpretation of test results.
  10. Ambient conditions at time of sample taking and testing and inspecting.
  11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
  12. Name and signature of laboratory inspector.
  13. Recommendations on retesting and reinspecting.
- E. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

## 1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- B. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- C. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- D. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in the State of Connecticut and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.
- F. Testing Agency Qualifications: An agency with the experience and capability to conduct testing and inspecting indicated, as documented by ASTM E 548, and that specializes in types of tests and inspections to be performed.
- G. Preconstruction Testing: Testing agency shall perform preconstruction testing for compliance with specified requirements for performance and test methods.
  - 1. Contractor responsibilities include the following:
    - a. Provide test specimens and assemblies representative of proposed materials and construction. Provide sizes and configurations of assemblies to adequately demonstrate capability of product to comply with performance requirements.
    - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
    - c. Fabricate and install test assemblies using installers who will perform the same tasks for Project.
    - d. When testing is complete, remove assemblies; do not reuse materials on Project.
  - 2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
- H. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
  - 1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.

2. Notify Architect seven (7) days in advance of dates and times when mockups will be constructed.
3. Demonstrate the proposed range of aesthetic effects and workmanship.
4. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
6. Demolish and remove mockups when directed, unless otherwise indicated.

1.6 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services. Owner shall only engage quality-control services directly related to Special Inspections for the Project.
1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of the types of testing and inspecting they are engaged to perform.
  2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Contractor Responsibilities: Unless otherwise indicated, provide quality-control services specified and required by authorities having jurisdiction.
1. Where services are indicated as Contractor's responsibility, or required by the Contract Documents and not part of the services provided by the Owner, Contractor shall engage a qualified testing agency to perform these quality-control services.
    - a. Contractor shall not employ the same entity engaged by Owner, unless agreed to in writing by Owner.
  2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
  3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
  4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
  5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Special Inspections: Owner will engage a testing agency to conduct special inspections and testing required by authorities having jurisdiction as the responsibility of Owner.
1. Testing agency will notify Special Inspector, Architect, and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
  2. Testing agency will submit a certified written report of each test, inspection, and similar quality-control service to Special Inspector and Architect, with copy to Contractor and to authorities having jurisdiction.
  3. Special Inspector will submit a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.

4. Special Inspector will interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
  5. Testing agency will retest and reinspect corrected work.
  6. The Schedule of Special Inspections for the project is attached to this Specification Section.
- D. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing.
- E. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that revised or replaced Work that failed to comply with requirements established by the Contract Documents.
- F. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
  2. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
  3. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
  4. Do not release, revoke, alter, or increase requirements of the Contract Documents or approve or accept any portion of the Work.
  5. Do not perform any duties of Contractor.
- G. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
  2. Incidental labor and facilities necessary to facilitate tests and inspections.
  3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
  4. Facilities for storage and field-curing of test samples.
  5. Preliminary design mix proposed for use for material mixes that require control by testing agency.
  6. Security and protection for samples and for testing and inspecting equipment at Project site.
- H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.
- I. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Submit schedule within thirty (30) days of date established for the Notice to Proceed.

1. Distribution: Distribute schedule to Owner, Architect, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.
- J. Testing lab costs, other than Special Inspections and tests not required in the Construction Documents, shall be paid by the Contractor. The Contractor shall be responsible for the coordination and scheduling of all testing services. No additional costs shall be incurred by the Owner and no time extensions shall be granted because of the Contractor's failure to coordinate and schedule testing in a timely manner or as required by the work progress.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
  1. Comply with the Contract Document requirements for Section 017310 "Cutting and Patching."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000



## SECTION 014200 - REFERENCES

## PART 1 - GENERAL

## 1.1 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": The term "approved," when used to convey Architect's action on Contractor's submittals, applications, and requests, is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by Architect, requested by Architect, and similar phrases.
- D. "Indicated": The term "indicated" refers to graphic representations, notes, or schedules on Drawings or to other paragraphs or schedules in Specifications and similar requirements in the Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the user locate the reference.
- E. "Regulations": The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": The term "furnish" means to supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": The term "install" describes operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": The term "provide" means to furnish and install, complete and ready for the intended use.
- I. "Installer": An installer is the Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
- J. The term "experienced," when used with an entity, means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- K. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name

- L. "Project Site" is the space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

## 1.2 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
- C. Conflicting Requirements: If compliance with two (2) or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
  - 1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.
- D. Copies of Standards: Each entity engaged in construction on Project must be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
  - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source and make them available on request.
- E. Abbreviations and Acronyms for Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the attached list. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.
- F. Abbreviations and Acronyms for Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the attached. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.
- G. Abbreviations and Acronyms for Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the attached list. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 014200



SECTION 014500 - PROJECT REQUIREMENTS

PART 1 - GENERAL

1.1 PROJECT REQUIREMENTS

- A. General: This Section identifies Project Requirements and defines terms not otherwise included in the remainder of the Construction Documents.

1.2 SUPERVISION AND CONSTRUCTION PROCEDURES

- A. The Contractor shall coordinate the work of the various trades required for the project to assure the efficient and orderly sequence of installation of construction elements. The Contractor will verify that characteristics of interrelated equipment are compatible, and shall coordinate the work of various trades having interdependent responsibilities for installing, connecting and placing equipment in service.
- B. The Contractor and each Subcontractor will verify all new and existing dimensions for all built-in work and/or work adjoining that of other trades, before ordering any material or doing any work. They will be responsible for the correction of all dimensions found to be in error. Any discrepancy in dimensioning will be submitted, in writing, to the Architect for his consideration, before proceeding with the Work.

1.3 SPECIAL PROCEDURES FOR THE PROJECT

- A. “Plan of Use”: If requested by the Owner, the Contractor shall prepare a “Plan of Use” for the Project which shall describe in detail the Contractor’s proposed use of the Site, both inside and outside the Contract Limit Area. The “Plan of Use” shall include, but not be limited to, the following: phasing of the project, including coordination and interaction with the Owner, allowances for Owner mobilization between phases, proposed vehicle and equipment access routes, locations of proposed storage areas, office trailer and dumpster locations, location of perimeter construction fencing and gates, other ground level protection measures around the Site, proposed pedestrian traffic flows around the Site and coordination with staging areas of other, concurrent projects at the Project Site. The Contractor shall submit the “Plan of Use” to the Architect for approval within seven (7) calendar days of the award of the first Contract for Construction, and Work on the Project shall not commence until an acceptable “Plan of Use” has been approved by the Architect and by the Owner. Any delay in the Project caused by the Contractor’s failure to submit an acceptable “Plan of Use” shall not alter the Contractor’s responsibility to complete the Work by the date of Substantial Completion as set forth in the remainder of the Documents.
- B. The Contractor shall protect persons entering and exiting the building and construction area from falling debris by any measures necessary, including the construction of temporary covered walkways.
- C. The Contractor shall protect the site and keep it in a clean and orderly condition. Construction debris will be cleaned up and disposed of daily. Existing site features scheduled to remain, including existing walks, driveways, parking lots, and planting and lawn areas are to be kept free of construction materials and debris.

- D. Any existing site conditions which are disturbed by construction activities shall be restored by the Contractor to their original condition at the Contractor's cost. The Architect shall judge the conditions to be restored by the Contractor and final payment will not be made until those conditions are restored.
- E. Weapons or Intoxicants: No person employed on this Project will bring intoxicants or any type of weapon onto the Site.
- F. Fraternization of Harassment: The Contractor is advised to avoid personal contact and fraternization with, and to respect the rights and privacy of, adjacent building occupants and people visiting adjacent buildings or the construction site.
- G. Smoking: Smoking shall not be permitted on site.

#### 1.4 SITE DOCUMENTS

- A. Contract Documents: The Contractor shall maintain at the Site one (1) clean copy of the Contract Documents (Drawings and Project Manual), Addenda, approved Shop Drawings, Change Orders, Change Directives, etc., in good order with up-to-date Project information, which will be available to the Architect and City Officials at all times.

#### 1.5 MANUFACTURER'S INSTRUCTIONS

- A. When the Contract Documents require that installation of any part of the Work will comply with a manufacturer's printed instructions, the Contractor shall obtain and distribute copies of such instructions to parties involved in the installation, including one copy to the Architect.
  - 1. Maintain one (1) complete set of instructions at the Site during installation and until the Date of Substantial Completion.
- B. The Contractor shall handle, install, connect, clean, condition and adjust products in strict accordance with such instructions, and in conformity with specified requirements.
  - 1. Should job conditions or specified requirements conflict with manufacturer's instructions, the Contractor shall consult with the Architect for further instructions.
  - 2. The Contractor will not proceed with the Work without clear instructions.
- C. The Contractor shall perform all Work in accordance with the manufacturer's instructions. Do not omit any preparatory step or installation procedure unless it is specifically modified or deleted by the Contract Documents.

#### 1.6 TRAFFIC WAYS

- A. The Contractor may use on-site paved roads and parking areas, as approved by the Owner, but will not block, encumber or otherwise obstruct the same. Public roadways will not be blocked by standing trucks, parked cars, material storage, and construction operations or in any other manner. The Owner will designate an area(s) within or outside of the Contract Limit Lines in which construction vehicles, dumpsters, etc., may be located, which shall be incorporated into the Contractor's "Plan of Use" per Article 1.3.A.

- B. The Contractor shall keep public roads and existing paved roads and driveways and parking areas on the Owner's property free of scrap or debris due to construction operations. The Contractor will repair, at the Contractor's expense, any damage to the surface of the roadways caused by the Contractor's construction operations.
- C. As the Work of the Contract affects public use of a street, road or highway, the Contractor shall confer with the police authority having jurisdiction to determine if and how many police are needed for public safety in addition to any barriers and signals that may be needed. The Contractor shall be responsible for payment of any required police or traffic control services, and shall include the cost of those services as part of the Base Contract.

#### 1.7 TEMPORARY CONTROLS

- A. During the progress of the Work, the Contractor will conduct his operations and provide adequate pollution controls to minimize the creation and dispersion of noise, odors, dust, dirt, and/or mud within and beyond the Site. The controls will be implemented to the satisfaction of the Owner, to the extent required to assure the Owner's continued use of its remainder of the facilities on site.
- B. Should the Owner's use of its facilities be denied or interrupted by the failure of the Contractor to provide adequate controls, as specified above, the Contractor will be required to cease operations until adequate controls are provided. All costs incurred in such a cessation of operations will be borne by the Contractor. No extension of time will be granted due to such a cessation in operations.

#### 1.8 CONSTRUCTION PHOTOGRAPHS/VIDEOTAPES

- A. ACES or the Architect may take progress photographs or videotapes at any time during the construction process. The Contractor will, at all times, allow unobstructed access to the Work for this purpose.

#### 1.9 SIGNAGE

- A. If approved in writing by ACES, the Contractor may provide a Construction Sign. If so, all entities designated on the project cover sheet shall be listed with minimum 3-inch-high lettering.
- B. Contractor shall provide all OSHA required signage, including but not limited to Authorized Personal Only, all warning signs, and all informational signs as required.

#### 1.10 REQUESTS FOR INFORMATION (RFI)

- A. Bidding and Construction Requests for Information are formal queries from the Contractor seeking interpretation of Construction Document requirements or information not otherwise available in the Construction Documents. RFIs shall clearly and concisely set forth the issue for which interpretation or information is sought, and why a response is needed from the Architect. RFIs shall describe the requesting party's understanding of the Contract Document requirement in question, along with reasons why this understanding has been reached. Responses from the Architect shall not change any requirements of the Contract Documents.
- B. Routine written communications between the Owner, the Architect and the Contractor shall be in letter or field memo format. Such communications shall not be identified as Requests for Information nor shall they substitute for any other written requirements pursuant to the provisions of these Contract Documents.

- C. In the event that the Contractor determines that some portion of the Contract Documents require interpretation or additional information by the Owner or Architect, the Contractor shall submit a Request for Information (RFI) in writing to the Architect. RFIs may only be submitted by the Contractor and not by Subcontractors, although Subcontractor correspondence may be attached by the Contractor to the RFI as supporting documentation.
- D. The Architect will review all RFIs to determine whether they are Requests for Information within the meaning of this term. If the Architect determines that the document is not an RFI, said document will be returned to the Contractor, unreviewed as to content, for resubmittal in the proper form and in the proper manner.
- E. RFIs shall be consecutively numbered. The Contractor shall maintain an RFI log for the duration of the Project. The Contractor's log shall be distributed to the Architect and ACES on a weekly basis. Communications determined by the Architect not to be RFIs shall be removed from the log, and their assigned number re-used so that the log will reflect consecutive RFI numbers without gap.
- F. Responses to RFIs will be issued within fourteen (14) calendar days of receipt of the request from the Contractor, unless the Architect determines that a longer time is required to provide an adequate response. If a longer time is determined to be required by the Architect, the Architect will, within seven (7) calendar days of receipt of request, notify the Contractor of the anticipated response time. The Contractor shall not be allowed any time extensions on the project because of RFIs, unless the Architect is unable to provide a response within the allocated fourteen (14) calendar days.
- G. Responses from the Architect shall not change any requirements of the Contract Documents. In the event the Contractor believes that a response to an RFI will cause a change in the Construction Documents, the Contractor shall, within seven (7) calendar days, give written notice to the Architect stating that the response to the RFI will cause changes to the requirements of the Construction Documents. Failure to give such notice shall waive the Contractor's right to seek additional time or cost under the Contract Modification Procedures Article of these Specifications.

#### 1.11 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

- A. Where discrepancies or conflict occur:
  - 1. Amendments and Addenda shall take precedence over the Specifications.
  - 2. The Specifications shall take precedence over the Drawings.
  - 3. Stated dimensions shall take precedence over scaled dimensions.
  - 4. Large-scale detail drawings shall take precedence over small-scale drawings.
  - 5. Schedules shall take precedence over other data on the drawings.
  - 6. In case of a difference between Drawings and Specifications or within either document itself in describing the Work, the better quality, greater quantity or costlier work will be assumed to be desired and shall be included in the Contractor's Bid and in the Contract price. Refer the matter to the Architect's attention for resolution after the Contract is awarded.
- B. All work shown or referred to in the Contract Documents shall be included in the Contract excepting those items which are specifically noted as being "provided under another contract," or "provided by the Owner," or "by others," or "not in contract (NIC)."



- C. Parties to the Contract shall not take advantage of any obvious error or apparent discrepancy in the Contract Documents. Notice of any discovered error or discrepancy shall immediately be given in writing to the Architect to make such corrections and interpretations as he may deem necessary for completion of the work in a satisfactory and acceptable manner.

1.12 COMMUNICATIONS TO THE ARCHITECT

- A. All Communications to the Architect shall be addressed to:

David Stein, AIA  
Silver/Petrucelli + Associates  
3190 Whitney Avenue, Building 2  
Hamden, CT 06518  
Telephone: (203) 230.9007 x201  
Email: [dstein@silverpetrucelli.com](mailto:dstein@silverpetrucelli.com)

1.13 CONFLICTING REQUIREMENTS

- A. In case of conflicts between Division 01 requirements and those requirements outlined in the Contract General and Supplementary Conditions, the most stringent requirement shall prevail.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 014500



SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; and comparable products.
- B. Related Sections:
  - 1. Section 012500 "Substitution Procedures" for requests for substitutions.
  - 2. Section 014200 "References" for applicable industry standards for products specified.

1.3 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
  - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
  - 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
  - 3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.

1.4 ACTION SUBMITTALS

- A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
  2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one (1) week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within seven (7) days of receipt of request, or seven (7) days of receipt of additional information or documentation, whichever is later.
    - a. Form of Approval: As specified in Section 013300 "Submittal Procedures."
    - b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.
- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Section 013300 "Submittal Procedures." Show compliance with requirements.

#### 1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two (2) or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.
1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.
  2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.

#### 1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
  2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
  3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
  4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.
- C. Storage:
1. Store products to allow for inspection and measurement of quantity or counting of units.
  2. Store materials in a manner that will not endanger Project structure.
  3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.

4. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
6. Protect stored products from damage and liquids from freezing.
7. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

## PART 2 - PRODUCTS

### 2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
  2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
  3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
  4. Where products are accompanied by the term "as selected," Architect will make selection.
  5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
  6. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.
- B. Product Selection Procedures:
1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
  2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
  3. Products:
    - a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one (1) of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered, unless otherwise indicated.
    - b. Non-Restricted List: Where Specifications include a list of names of both available manufacturers and products, provide one (1) of the products listed, or an unnamed product, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product.

4. Manufacturers:
    - a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one (1) of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered, unless otherwise indicated.
    - b. Non-Restricted List: Where Specifications include a list of available manufacturers, provide a product by one (1) of the manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed manufacturer's product.
  5. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one (1) of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one (1) of the other named manufacturers.
- C. Visual Matching Specification: Where Specifications require "match Architect's sample", provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Section 012500 "Substitution Procedures" for proposal of product.
- D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.
- 2.2 COMPARABLE PRODUCTS
- A. Conditions for Consideration: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:
1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
  2. Detailed, SIDE-BY-SIDE comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
  3. Evidence that proposed product provides specified warranty.
  4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
  5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000





SECTION 017310 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 INCLUDED IN THIS SECTION

- A. General cutting and patching.
- B. Specific cutting and patching requirements.

1.2 CUTTING AND PATCHING - GENERAL

- A. Contractor shall be responsible for any alteration of existing work and cutting, patching of work as required by the installation of materials or performance of labor in contract.
- B. Match existing products and work for patching and extending work.
  - 1. New materials as specified in individual sections.
  - 2. Determine type and quality of existing products by inspection and any necessary testing, and workmanship by use of existing as a standard. Presence of a product, finish, or type of work, requires that patching, extending, or matching shall be performed as necessary to make work complete and consistent with specifications.
  - 3. Refinish visible existing surfaces to remain in renovated rooms and spaces, to specified condition for each material, with a neat transition to adjacent new finishes.
- C. Do not cut structural members without first consulting and/or review intended procedures with Engineer. Contractor shall keep a written record of consulting and distributed this information to all relevant parties prior to proceeding. If the situation is of an unforeseen condition, prior to proceeding the Contractor shall submit a written Request for Information (RFI) to the Architect.
- D. Protect existing items.
- E. Bid Package Contractors are responsible for any cutting, coring and patching in the performance of their work due to the lack of installing sleeves or blocking in walls, floors or foundations.
  - 1. Remove, cut and patch work in a manner to minimize damage and to provide means of restoring products and finishes to original or specified condition.
- F. Transitions
  - 1. Where new work abuts or aligns with existing, make a smooth and even transition. Patched work shall match existing adjacent work in texture and appearance.
  - 2. Finish patches to produce uniform finish and texture over entire area. When finish cannot be matched, refinish entire surface to nearest intersections.
  - 3. When finished, surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendations to Architect.

---

PART 2 - PRODUCTS

## 2.1 SUBMITTALS

- A. Schedule: Submit schedule indicating proposed methods and sequence of operations for cutting and patching work to Owner's Representative for review prior to commencement of work. Include coordination for shut-off, capping, and continuation of utility services as required, together with details for dust and noise control protection.
- B. Provide detailed sequence of cutting and patching and removal work to ensure uninterrupted progress of Owner's on-site operations.

## 2.2 JOB CONDITIONS

- A. Protections: Provide temporary barricades and other forms of protection as required to protect Owner's personnel and general public from injury due to cutting and patching work.
  - 1. Provide protective measures as required to provide free and safe passage of Owner's personnel and general public to and from building.
  - 2. Erect temporary covered passageways as required by authorities having jurisdiction.
  - 3. Provide interior shoring, bracing, or support to prevent movement, settlement, or collapse of structure or element to be demolished, and adjacent facilities or work to remain.
  - 4. Protect from damage existing finish work that is to remain in place and becomes exposed during cutting and patching operations.
  - 5. Protect finished floors with suitable coverings.
  - 6. Construct temporary fire-rated and insulated solid dustproof partitions to separate work area from the remainder of the school complex.
  - 7. Provide temporary weather protection during interval between demolition and removal of existing construction on exterior surfaces, and installation of new construction to insure that no water leakage or damage occurs to structure or interior areas of existing building.
  - 8. Remove protections at completion of work.
- B. Damages: Promptly repair damages caused by cutting and patching work at no cost to Owner.
- C. Traffic: Conduct cutting and patching operations and debris removal in a manner to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close, block or otherwise obstruct streets, walks or other occupied or used facilities without written permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
- D. Explosives: Use of explosives will not be permitted.
- E. Utility Services: Maintain existing utilities to remain, keep in service, and protect against damage during cutting and patching operations.
- F. Environmental Controls: Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in air to lowest practical level. Comply with governing regulations pertaining to environmental protection. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, and pollution.

---

PART 3 - EXECUTION

## 3.1 INSPECTION

- A. Prior to commencement of cutting and patching work, inspect areas in which work will be performed. Photograph existing conditions to structure, surfaces, equipment or to surrounding properties which could be misconstrued as damage resulting from cutting and patching work. Submit these documents to the Architect prior to starting work.

## 3.2 PREPARATION

- A. Provide interior shoring, bracing, or support to prevent movement, settlement or collapse of structures to be demolished and adjacent facilities to remain. Cease operations and notify the Owner's Representative immediately if safety of structure appears to be endangered. Take precautions to support structure until determination is made for continuing operations.
- B. Cover and protect furniture, equipment and fixtures to remain from soiling or damage when cutting and patching work is performed in rooms or areas from which such items have not been removed.
- C. Erect and maintain dust-proof partitions and closures as required to prevent spread of dust or fumes.
- D. Provide weatherproof closures for exterior openings resulting from cutting and patching work.
- E. Locate, identify, stub off and disconnect utility services that are not indicated to remain. Provide by-pass connections as necessary to maintain continuity of service, if required. Provide minimum of 72 hours advance notice to Owner if shut-down of service is necessary during change-over.

## 3.3 CUTTING AND PATCHING

- A. Perform removal, relocation and cutting and patching work in a systematic manner. Use such methods as required to complete work indicated on Drawings in accordance with cutting and patching schedule and governing regulations.
  - 1. Provide services for effective air and water pollution controls as required by local authorities having jurisdiction.
  - 2. For interior work, use removal methods that will not crack or structurally disturb adjacent floors or partitions.
- B. If unanticipated mechanical, electrical or structural elements which conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict. Submit report to Architect in written, accurate detail. Pending receipt of directive from Architect rearrange cutting and patching schedule as necessary to continue overall job progress without delay.

## 3.4 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove debris, rubbish and other materials resulting from cutting and patching operations from building site. Transport and legally dispose of materials off site.
- B. If hazardous materials are encountered during cutting and patching operations, comply with applicable regulations, laws, and ordinances concerning removal, handling and protection against exposure or environmental pollution.

- C. Burning of removed materials is not permitted on project site.

3.5 CLEAN-UP AND REPAIR

- A. Upon completion of cutting and patching work, remove tools, equipment and demolished materials from site. Remove protections and leave interior areas broom clean.
- B. Repair cutting and patching performed in excess of that required. Return structures and surfaces to remain to condition existing prior to commencement of cutting and patching work. Repair adjacent construction or surfaces soiled or damaged by cutting and patching work.

END OF SECTION 017310

SECTION 017400 - WARRANTIES AND BONDS

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturer's standard warranties on products and special warranties.
  - 1. Refer to the General Conditions for terms of the Contractor's special warranty of workmanship and materials.
  - 2. General closeout requirements are included in Section 017700 "Closeout Procedures".
  - 3. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.
- B. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.2 DEFINITIONS

- A. Standard Product Warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.
- B. Special Warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.

1.3 WARRANTY REQUIREMENTS

- A. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.
- B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.
- D. Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law,

nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights, or remedies.

1. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
2. The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

#### 1.4 SUBMITTALS

- A. Submit written warranties to the Engineer at the time of Substantial Completion. The start date of all project warranties shall be the date of Substantial Completion for the Project.
- B. When a special warranty is required to be executed by the Contractor, or the Contractor and a subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner through the Architect for approval prior to final execution.
- C. Form of Submittal: At Final Completion compile two (2) copies of each required warranty and bond properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 017400

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
  - 1. Inspection procedures.
  - 2. Project Record Documents.
  - 3. Operation and maintenance manuals.
  - 4. Instruction of Owner's personnel.
  - 5. Final cleaning.
  - 6. Attic stock.
- B. Related Sections include the following:
  - 1. Section 012900 "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
  - 2. Section 017400 "Warranties and Bonds" for warranty submittal requirements.
  - 3. Divisions 02 through 49 Sections for specific closeout and special cleaning requirements for products of those Sections.

1.2 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
  - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
  - 2. Advise Owner of pending insurance changeover requirements.
  - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
  - 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  - 5. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
  - 6. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
  - 7. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

### 1.3 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
  1. Submit a final Application for Payment according to Section 012900 "Payment Procedures."
  2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
  3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
  4. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
  1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

### 1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit three (3) copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
  1. Organize list of spaces in sequential order.
  2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
  3. Include the following information at the top of each page:
    - a. Project name.
    - b. Date.
    - c. Name of Contractor.
    - d. Page number.

### 1.5 PROJECT RECORD DOCUMENTS

- A. General: Do not use Project Record Documents for construction purposes. Protect Project Record Documents from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.
- B. Record Drawings: Maintain and submit one (1) set of blue- or black-line white prints of Contract Drawings and Shop Drawings.



1. Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
    - a. Give particular attention to information on concealed elements that cannot be readily identified and recorded later.
    - b. Accurately record information in an understandable drawing technique.
    - c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
    - d. Mark Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. Where Shop Drawings are marked, show cross-reference on Contract Drawings.
  2. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.
  3. Mark important additional information that was either shown schematically or omitted from original Drawings.
  4. Note Construction Change Directive numbers, Change Order numbers, alternate numbers, and similar identification where applicable.
  5. Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location. Organize into manageable sets; bind each set with durable paper cover sheets. Include identification on cover sheets.
- C. Record Specifications: Submit one (1) copy of Project's Specifications, including addenda and contract modifications. Mark copy to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
- D. Miscellaneous Record Submittals: Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.
- 1.6 OPERATION AND MAINTENANCE MANUALS
- A. Assemble a complete set of operation and maintenance data indicating the operation and maintenance of each system, subsystem, and piece of equipment not part of a system. Include operation and maintenance data required in individual Specification Sections and as follows:
1. Operation Data:
    - a. Emergency instructions and procedures.
    - b. System, subsystem, and equipment descriptions, including operating standards.
  2. Maintenance Data:
    - a. Manufacturer's information, including list of spare parts.

- b. Name, address, and telephone number of Installer or supplier.
  - c. Maintenance procedures.
  - d. Maintenance and service schedules for preventive and routine maintenance.
  - e. Maintenance record forms.
  - f. Sources of spare parts and maintenance materials.
  - g. Copies of warranties and bonds.
- B. Organize operation and maintenance manuals into suitable sets of manageable size. Bind and index data in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, with pocket inside the covers to receive folded oversized sheets. Identify each binder on front and spine with the printed title "OPERATION AND MAINTENANCE MANUAL," Project name, and subject matter of contents.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

## PART 3 - EXECUTION

### 3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
  - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
    - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
    - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
    - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
    - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
    - e. Remove snow and ice to provide safe access to building.
    - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.

- g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
  - h. Sweep concrete floors broom clean in unoccupied spaces.
  - i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
  - j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
  - k. Remove labels that are not permanent.
  - l. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
    - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
  - m. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
  - n. Replace parts subject to unusual operating conditions.
  - o. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 017700



SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

- 1. Demolition and removal of selected portions of building or structure.
- 2. Salvage of existing items to be reused or recycled.

B. Related Requirements:

- 1. Section 011000 "Summary of Work" for restrictions on use of the premises, Owner-occupancy requirements, and phasing requirements.
- 2. Section 017310 "Cutting and Patching" for cutting and patching procedures.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.
- B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- D. Remove and Replace: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled. Provide and install new items as specified.
- E. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.
- F. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

1.4 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.

1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

#### 1.5 PREINSTALLATION MEETINGS

- A. Predemolition Conference: Conduct conference at Project site.

1. Inspect and discuss condition of construction to be selectively demolished.
2. Review structural load limitations of existing structure.
3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
5. Review areas where existing construction is to remain and requires protection.

#### 1.6 INFORMATIONAL SUBMITTALS

- A. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection, for dust control and for noise control. Indicate proposed locations and construction of barriers.
- B. Schedule of Selective Demolition Activities: Indicate the following:
1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
  2. Interruption of utility services. Indicate how long utility services will be interrupted.
  3. Coordination for shutoff, capping, and continuation of utility services.
  4. Use of elevator and stairs.
  5. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
- C. Predemolition Photographs: Show existing conditions of adjoining construction, including finish surfaces, that might be misconstrued as damage caused by demolition operations. Comply with Section 014500 "Project Requirements." Submit before Work begins.

#### 1.7 CLOSEOUT SUBMITTALS

- A. Inventory: Submit a list of items that have been removed and salvaged.

#### 1.8 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

- D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
  - 1. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract. Contractor will be required to coordinate with Owner's vendor.
- E. Storage or sale of removed items or materials on-site is not permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
  - 1. Maintain fire-protection facilities in service during selective demolition operations.

#### 1.9 COORDINATION

- A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

### PART 2 - PRODUCTS

#### 2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ASSE A10.6 and NFPA 241.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.
  - 1. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.
- C. Survey of Existing Conditions: Record existing conditions by use of measured drawings and preconstruction photographs.
  - 1. Comply with requirements specified in Section 014500 "Project Requirements."
  - 2. Inventory and record the condition of items to be removed and salvaged. Provide photographs of conditions that might be misconstrued as damage caused by salvage operations.

### 3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
  - 1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
  - 2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
  - 3. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated on Drawings to be removed.
    - a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
    - b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
    - c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
    - d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
    - e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
    - f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
    - g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material and leave in place.

### 3.3 PROTECTION

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
  - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
  - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
  - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
  - 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
  - 5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Section 014500 "Project Requirements."
- B. Remove temporary barricades and protections where hazards no longer exist.



## 3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
  2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
  3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
  4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
  5. Maintain adequate ventilation when using cutting torches.
  6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
  7. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
  8. All removed materials and rubbish shall be constantly sprinkled with water or other dusting agent to mitigate dust. Provide drop cloths or other type of coverings to prevent infiltration of dust to other parts of the existing building.
  9. Dispose of demolished items and materials promptly.
- B. Removed and Salvaged Items:
1. Clean salvaged items.
  2. Pack or crate items after cleaning. Identify contents of containers.
  3. Store items in a secure area until delivery to Owner.
  4. Transport items to Owner's storage area designated by Owner.
  5. Protect items from damage during transport and storage.
- C. Removed and Reinstalled Items:
1. Clean and repair items to functional condition adequate for intended reuse.
  2. Pack or crate items after cleaning and repairing. Identify contents of containers.
  3. Protect items from damage during transport and storage.
  4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.
  - 1. Do not allow demolished materials to accumulate on-site.
  - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
  - 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- B. Burning: Do not burn demolished materials.

3.6 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

# STATE OF CONNECTICUT

## DEPARTMENT OF PUBLIC HEALTH


Renée D. Coleman-Mitchell, MPH  
Commissioner-Designate



Ned Lamont  
Governor  
Susan Bysiewicz  
Lt. Governor

### Environmental Health Section

**To:** Mr. Todd Solli, Principal  
Wintergreen Interdistrict Magnet School  
88 Bassett Road  
North Haven, CT 06473

**From:** Laschone P. Garrison, Environmental Sanitarian 2  
  
Asbestos Program  
Department of Public Health (DPH)  
410 Capitol Ave, MS 12 AIR, Hartford, CT 06134-0308

**Date:** September 11, 2019

**Subject:** Asbestos Management Plan  
Wintergreen Interdistrict Magnet School

The Connecticut Department of Public Health (DPH) has reviewed the AMP submitted by Eagle Environmental, Inc. on August 12, 2019, as required by 40 C.F.R. Part 763, the "Asbestos Hazard Emergency Response Act" (AHERA) regulation and the Regulations of Connecticut State Agencies, Sections 19a-333-1 through 13, "Asbestos- Containing Materials in Schools" regulation.

The AMP appears to be complete and in conformation with the submission requirements.

Please retain a copy of this approval letter in the management plan as there must be a complete, up to date management plan in the school office. Please feel free to contact this office should you have any questions regarding this correspondence or asbestos management in schools.

cc: Ashis Roychowdhury, Eagle Environmental, Inc.



Phone: (860) 509-7365 • Fax: (860) 509-7378  
Telecommunications Relay Service 7-1-1  
410 Capitol Avenue, M.S. #12 AIR, P.O. Box 340308  
Hartford, Connecticut 06134-0308  
[www.ct.gov/dph](http://www.ct.gov/dph)

*Affirmative Action/Equal Opportunity Employer*



# **Asbestos Hazard Emergency Response Act Initial Asbestos Inspection and Management Plan**

**Inspection Dates: May 30 & 31, 2019**

**Area Cooperative Educational Services (ACES)  
350 State Street  
North Haven, Connecticut**

**For Compliance with  
State of Connecticut, Department of Public Health  
Regulation Regarding Asbestos-Containing Material in Schools  
(19a - 333-1 through 19a - 333-13)  
and  
The EPA Asbestos Hazard Emergency Response Act  
(AHERA, 40 CFR Part 763)**

**Wintergreen Interdistrict Magnet School  
88 Bassett Road  
North Haven, Connecticut**

**Report Date: August 9 2019**

**Eagle Environmental, Inc.  
8 South Main Street  
Terryville, Connecticut  
(860) 589-8257**



**EAGLE**  
**Environmental, Inc.**

- Industrial Hygiene / IAQ
- Hazardous Building Materials
- Environmental Assessments
- Laboratory Services & Training

August 9, 2019

Mr. Timothy Gunn  
Director of Facilities  
Area Cooperative Educational Services (ACES)  
350 State Street  
North Haven, Connecticut 06473

**RE: AHERA Asbestos Initial Inspection & Management Plan  
Wintergreen Interdistrict Magnet School  
88 Bassett Road  
North Haven, Connecticut  
Eagle Environmental Project No. 19-139.10T1**

Dear Mr. Gunn:

Enclosed is the report of the Initial AHERA Asbestos Inspection and Management Plan (AMP) conducted by Eagle Environmental, Inc. for Wintergreen Interdistrict Magnet School located at 88 Bassett Road in North Haven, Connecticut.

A copy of this plan is being sent under separate cover to the State of Connecticut Department of Public Health (CTDPH) for approval. Once approval is granted, ACES needs to conduct Periodic Surveillance every 6 months and major Re-inspection every 3 years until all the asbestos-containing building materials are removed. ACES also needs to notify parents/guardians/teachers once every year about the existence of the AMP). This report is an important document, a copy of which must be kept on file at the main office of the school and made available to parents/guardians and staff. The original needs to be maintained at a central location where all the AMP's are preserved.

If you have any questions regarding this report, please do not hesitate to contact us. Thank you for this opportunity to have served your environmental needs.

Sincerely,  
**Eagle Environmental, Inc.**

Ashis Roychowdhury  
Executive Vice President  
Asbestos Inspector/Management Planner (License #000108)

cc: Ms. Laschone Garrison / CTDPH

Enclosure

Z:\2019 Files\2019 Reports\ACES - Area Cooperative Education Services\Wintergreen Interdistrict Magnet School\New WIMS Frm Gateway CC\88 Bassett Rd - AHERA Asbestos Initial Inspection Report.doc

**8 SOUTH MAIN STREET, SUITE 3 • TERRYVILLE, CT 06786**  
**PHONE (860) 589-8257 • FAX (860) 585-7034**

**ASBESTOS HAZARD EMERGENCY RESPONSE ACT  
ASBESTOS INITIAL INSPECTION AND MANAGEMENT PLAN**

**WINTERGREEN INTERDISTRICT MAGNET SCHOOL  
88 BASSETT ROAD  
NORTH HAVEN, CONNECTICUT**

**TABLE OF CONTENTS**

**SECTIONS**

**PAGE**

**SECTION A**

- 1.0 DPH INSPECTION FORM
- 2.0 AHERA INFORMATION PAGE
- 3.0 DESIGNATED PERSON STATEMENT OF ASSURANCE
- 4.0 INITIAL & ADDITIONAL CLEANING REQUIREMENTS

**SECTION B**

- 1.0 INTRODUCTION..... 1
- 2.0 BUILDING AND MECHANICAL SYSTEM DESCRIPTION ..... 1
- 3.0 INSPECTION REPORT ..... 1-5
  - 3.1 Introduction
  - 3.2 Identification of ACBM
  - 3.3 Physical Assessment of ACBMs
- 4.0 MANAGEMENT PLAN ..... 5-8
  - 4.1 Recommended Response Actions
  - 4.2 AHERA 3-Year Re-inspection
  - 4.3 AHERA 6-Month Periodic Surveillance
  - 4.4 Annual Notification Letter
  - 4.5 Notification to Short-Term Workers and Contractors
  - 4.6 Asbestos Emergency Response Action
    - 4.6.1 General
    - 4.6.2 Minor Fiber Release Episode (<3 Square or Linear Feet of ACM)
    - 4.6.3 Major Fiber Release Episode (>3 Square or Linear Feet of ACM)
  - 4.7 Schedule and Resources Required for Implementation of Response Actions
- 5.0 EPA CERTIFICATION REQUIREMENTS ..... 8-9

**ASBESTOS HAZARD EMERGENCY RESPONSE ACT  
ASBESTOS INITIAL INSPECTION AND MANAGEMENT PLAN**

**WINTERGREEN INTERDISTRICT MAGNET SCHOOL  
88 BASSETT ROAD  
NORTH HAVEN, CONNECTICUT**

**TABLE OF CONTENTS**

**ATTACHMENTS**

ATTACHMENT A – DELTA ENVIRONMENTAL SERVICES REPORT  
ATTACHMENT B – SUMMARY TABLES  
ATTACHMENT C – FLOOR PLAN AND SAMPLE LOCATION DIAGRAM  
ATTACHMENT D – BULK SAMPLE RESULTS

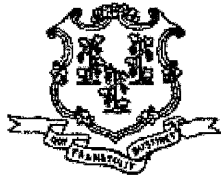
**APPENDICES**

APPENDIX A - OPERATIONS & MAINTENANCE PROCEDURES  
APPENDIX B - PERIODIC SURVEILLANCE FORM  
APPENDIX C – INITIAL CLEANING LETTER  
APPENDIX D - ANNUAL NOTIFICATION LETTER  
APPENDIX E - NOTIFICATION TO SHORT-TERM WORKERS/CONTRACTORS  
APPENDIX F - ABATEMENT ACTION FORM  
APPENDIX G - CONSULTANT CERTIFICATES  
APPENDIX H - DESIGNATED PERSON TRAINING CERTIFICATE  
APPENDIX I – LABORATORY CERTIFICATE

## **SECTION A**



**DPH 3-YEAR RE-INSPECTION FORM (1.0)**



**LOCAL EDUCATION AGENCY (LEA) MANDATORY REPORT DOCUMENTATION  
OF THE INITIAL INSPECTION FOR ASBESTOS-CONTAINING MATERIALS**

*This document is required to be filed in accordance with Section 19a-333-3(b) of the  
Regulations of Connecticut State Agencies (Asbestos Containing Materials in Schools)*

**INSTRUCTIONS to the Local Education Agency:**

1. This form must be typewritten.
2. If any space allowed is inadequate, continue on the reverse of this sheet, or attach a second page.
3. Return **original** form to the State of CT Department of Public Health, 410 Capitol Ave, PO Box 340308, Hartford, CT. 06134-0308 **within thirty days of completion of inspection**. Return a signed copy to the consultant.
4. Place a **copy of the completed form** in the central office management plan with each of the school's plans.

Area Cooperative Educational Services (ACES)

LOCAL EDUCATION AGENCY

350 State Street, North Haven, Connecticut  
ADDRESS

School Name and Address	Date Management Plan Accepted by State	Initial Inspection Date	Next Reinspection Due
Wintergreen Interdistrict Magnet School	N/A	May, 2002	May, 2020

\*(USE ADDITIONAL FORMS TO LIST ADDITIONAL SCHOOL BUILDINGS)

**Inspector/s:** Taylor Carfiro  
Please attach copies of current Inspector license and current refresher certificate

**Signature:** 

**Management Planner:** Ashis Roychowdhury  
Please attach copies of current Management Planner license and current refresher certificate

**Signature:** 

**LEA Designated Person:** Timothy Gunn  
Please attach documentation of training

**Signature:** See next page for DP signature

- I, Timothy Gunn am the designated person for this local education agency – I understand my responsibilities as the designated person, and have reviewed the management planner's recommendations.
- It is required that new custodial and maintenance employees attend a two (2) hour asbestos awareness training program within 60 working days of employment. Documentation that such training has been provided must be included in the management plan.

(OVER, PLEASE)



(860) 509-7367 / Fax (860) 509-7378  
410 Capitol Avenue – MS #51 AIR  
P.O. Box 340308 Hartford, CT 06134  
Affirmative Action / An Equal Opportunity Employer



**LOCAL EDUCATION AGENCY (LEA) MANDATORY REPORT DOCUMENTATION  
OF THE INITIAL INSPECTION FOR ASBESTOS-CONTAINING MATERIALS**

*This document is required to be filed in accordance with Section 19a-333-3(b) of the  
Regulations of Connecticut State Agencies (Asbestos Containing Materials in Schools)*

**INSTRUCTIONS to the Local Education Agency:**

1. This form must be typewritten.
2. If any space allowed is inadequate, continue on the reverse of this sheet, or attach a second page.
3. Return **original** form to the State of CT Department of Public Health, 410 Capitol Ave, PO Box 340308, Hartford, CT. 06134-0308 **within thirty days of completion of inspection**. Return a signed copy to the consultant.
4. Place a **copy of the completed form** in the central office management plan with each of the school's plans.

Area Cooperative Educational Services (ACES)

LOCAL EDUCATION AGENCY

350 State Street, North Haven, Connecticut

ADDRESS


School Name and Address	Date Management Plan Accepted by State	Initial Inspection Date	Next Reinspection Due
Wintergreen Interdistrict Magnet School	N/A	May, 2002	May, 2020

\*(USE ADDITIONAL FORMS TO LIST ADDITIONAL SCHOOL BUILDINGS)

**Inspector/s:** Taylor Carfiro  
Please attach copies of current Inspector license and current refresher certificate

**Signature:** \_\_\_\_\_

**Management Planner:** Ashis Roychowdhury  
Please attach copies of current Management Planner license and current refresher certificate

**Signature:** 

**LEA Designated Person:** Timothy Gunn  
Please attach documentation of training

**Signature:** 

- I, Timothy Gunn am the designated person for this local education agency – I understand my responsibilities as the designated person, and have reviewed the management planner's recommendations.
- It is required that new custodial and maintenance employees attend a two (2) hour asbestos awareness training program within 60 working days of employment. Documentation that such training has been provided must be included in the management plan.

(OVER, PLEASE)



(860) 509-7367 / Fax (860) 509-7378  
410 Capitol Avenue – MS #51 AIR  
P.O. Box 340308 Hartford, CT 06134  
Affirmative Action / An Equal Opportunity Employer

**ATTACHMENT A - MANAGEMENT PLANNER RECOMMENDATIONS  
(OTHER THAN O&M and PREVENTIVE MEASURES)**

**INSTRUCTIONS:** The Management Planner (MP) is to complete this form for each school building that is subject to the three-year reinspection requirements of Section 19a-333-3 of the Regulations of Connecticut State Agencies, and the MP recommends a response action other than Operations and Maintenance and/or preventive measures.

The MP shall specify the name of the school, the nature of the recommendation (e.g. remove, repair), location of the asbestos-containing building material (ACBM) associated with the recommendation (e.g. cafeteria – roof drain insulation) and approximate quantity. Please use a separate entry when the management planner lists multiple recommendations for a single school. Attach as many forms to the prescribed form as necessary to list separate entries for multiple schools.

Name of School	MP Recommendation	Location/Type and Amount of ACBM
Wintergreen Interdistrict Magnet School	15 LF cracking/missing. Remove and replace with non- ACM caulk.	Office (001), Window Caulk, 50 LF
	30 LF cracking. Remove and replace with non- ACM caulk.	Classroom (003), Window Caulk, 50LF
	15 LF cracking. Replace with non- ACM materials.	Office (004), Window Caulk, 25 LF
	10 SF cracking. Remove and replace with non- ACM caulk.	Office (005), Window Caulk, 25 LF
	2 LF cracking/missing. Remove & replace with non- ACM caulk.	Office (007), Door Frame Caulk, 70 LF
	5 Tiles chipped exposing mastic. Repair using non-ACM epoxy.	Classroom/Lab (010), 9" x 9" Floor Tile-tan & Associated Mastic, 1040 SF
	15 LF cracking/missing. Remove and replace with non- ACM caulk.	Classroom/Lab (010), Window Caulk, 25 LF
	4 LF cracking/missing. Remove & replace with non- ACM caulk.	Classroom/Lab (010), Door Frame Caulk, 70 SF
	10 Tiles cracking/missing exposing mastic. Repair using non-ACM epoxy.	Toyota Lab (011), 9" x 9" Floor Tile-light grey & Associated Mastic, 1080 SF
	20 LF cracking. Remove and replace with non- ACM caulk.	Toyota Lab (011), Window Caulk, 50 LF
	25 LF cracking. Remove and replace with non- ACM caulk.	GM Lab (012), Window Caulk, 50 LF
	50 LF cracking. Remove and replace with non- ACM caulk.	Connecting Passage (018), Window Caulk, 80 LF
	15 LF cracking/missing. Remove and replace with non- ACM caulk.	Women's Room (022), Door Frame Caulk, 35 LF
	20 LF cracking. Remove and replace with non- ACM caulk.	Auto Lab (014), Door Frame Caulk, 200 LF

Note 1: Only a licensed Asbestos Inspector can collect the samples.

Note 2: Only a licensed Asbestos Abatement Contractor can perform repair/removal.

Page 1 of 11

Management Planner Signature:

Date:



8-8-2019

**ATTACHMENT A - MANAGEMENT PLANNER RECOMMENDATIONS  
(OTHER THAN O&M and PREVENTIVE MEASURES)**

**INSTRUCTIONS:** The Management Planner (MP) is to complete this form for each school building that is subject to the three-year reinspection requirements of Section 19a-333-3 of the Regulations of Connecticut State Agencies, and the MP recommends a response action other than Operations and Maintenance and/or preventive measures.

The MP shall specify the name of the school, the nature of the recommendation (e.g. remove, repair), location of the asbestos-containing building material (ACBM) associated with the recommendation (e.g. cafeteria – roof drain insulation) and approximate quantity. Please use a separate entry when the management planner lists multiple recommendations for a single school. Attach as many forms to the prescribed form as necessary to list separate entries for multiple schools.

Name of School	MP Recommendation	Location/Type and Amount of ACBM
Wintergreen Interdistrict Magnet School	40 LF cracking. Remove and replace with non-ACM caulk.	Main Lobby (142), Window Caulk, 100 LF
	20 LF cracking. Remove and replace with non-ACM caulk.	Business and Industry (100A), Window Caulk, 25 LF
	2 SF dents/chips. Repair the damage using non-ACM epoxy.	Phone Closet (144), 9" x 9" Floor Tile-tan & Associated Mastic
	20 LF cracking. Remove and replace with non-ACM caulk.	Office (102E), Window Caulk, 25 LF
	8 LF cracking. Remove and replace with non-ACM caulk.	Office (103B), Window Caulk, 50 LF
	2 LF cracking. Remove & replace with non-ACM caulk.	Office (103C), Door Frame Caulk, 35 LF
	10 LF cracking. Remove and replace with non-ACM materials.	Office (103E), Window Caulk, 25 LF
	5 Tiles chipped exposing mastic. Repair using non-ACM epoxy.	North Corridor (146), 9" x 9" Floor Tile-green, red, tan & Associated Mastic, 1330 SF
	2 LF cracking. Remove & replace with non-ACM caulk.	North Corridor (146), Door Frame Caulk, 50 LF
	8 Tiles cracking. Repair the damage using non-ACM epoxy.	West Corridor (147), 9" x 9" Floor Tile-green, red, tan & Associated Mastic, 490 SF
	6 Tiles cracking and 6 tiles missing exposing mastic. Repair the cracked tiles using epoxy.	South Corridor (148), 9" x 9" Floor Tile-green, red, tan & Associated Mastic, 1330 SF
	20 Tiles chipped/holes exposing mastic. Remove the damaged materials and replace by new non-ACM tiles and mastic. Tile that are only chipped but have no exposed mastic can be repaired using non-ACM epoxy	Classroom (105), 9" x 9" Floor Tile-tan & Associated Mastic, 1500 SF
	40 LF cracking. Remove and replace with non-ACM materials.	Classroom (105), Window Caulk, 50 LF

Note 1: Only a licensed Asbestos Inspector can collect the samples.

Note 2: Only a licensed Asbestos Abatement Contractor can perform repair/removal.

Page 2 of 11

Management Planner Signature:

Date:



8-8-2019

**ATTACHMENT A - MANAGEMENT PLANNER RECOMMENDATIONS  
(OTHER THAN O&M and PREVENTIVE MEASURES)**

**INSTRUCTIONS:** The Management Planner (MP) is to complete this form for each school building that is subject to the three-year reinspection requirements of Section 19a-333-3 of the Regulations of Connecticut State Agencies, and the MP recommends a response action other than Operations and Maintenance and/or preventive measures.

The MP shall specify the name of the school, the nature of the recommendation (e.g. remove, repair), location of the asbestos-containing building material (ACBM) associated with the recommendation (e.g. cafeteria – roof drain insulation) and approximate quantity. Please use a separate entry when the management planner lists multiple recommendations for a single school. Attach as many forms to the prescribed form as necessary to list separate entries for multiple schools.

Name of School	MP Recommendation	Location/Type and Amount of ACBM
Wintergreen Interdistrict Magnet School	20 LF missing/cracking. Remove and replace with non- ACM materials.	Maintenance (106), Door Frame Caulk, 50 LF
	< 1 SF chips/cracks. Repair the damage using non-ACM epoxy.	Classroom (107), 9" x 9" Floor Tile-tan & Associated Mastic, 1500 SF
	20 LF cracking. Remove and replace with non-ACM caulk.	Classroom (107), Window Caulk, 25 LF
	10 LF cracking. Remove and replace with non-ACM materials.	Office (108), Window Caulk, 25 LF
	The entire caulk is cracking. Remove and replace with non- ACM materials.	Darkrooms (150), Window Caulk, 25 LF
	Loose tiles. Monitor the condition & if the condition deteriorates remove & replace with non- ACM tile and mastic.	Darkrooms (150), 9" x 9" Floor Tile-light grey & Associated Mastic
	6 SF chipped/cracked/missing exposing mastic. Remove the damaged tiles and replace by new non-ACM tiles and mastic.	Classroom (110), 9" x 9" Floor Tile-tan & Associated Mastic, 1290 SF
	20 LF cracking. Remove and replace with non-ACM materials.	Classroom (110), Window Caulk, 50 LF
	15 Tiles chipped/missing exposing mastic. Remove the damaged tiles and replace by new non-ACM tiles and mastic.	Graphics Classroom (111), 9" x 9" Floor Tile-light green & Associated Mastic, 1420 SF
	20 LF cracking. Remove and replace with non-ACM materials.	Graphics Classroom (111), Window Caulk, 25 LF
	2 LF cracking. Remove & replace with non-ACM caulk.	Graphics Classroom (111), Door Frame Caulk, 120 LF
	3 SF missing/chipped exposing mastic. Repair using non-ACM epoxy.	Office (112), 9" x 9" Floor Tile-light green & Associated Mastic, 200 SF
	20 LF cracking. Remove and replace with non-ACM caulk.	Office (112), Window Caulk, 25 LF
	50 LF cracking. Remove and replace with non-ACM caulk.	Conference Room (113), Window Caulk, 120 LF

Note 1: Only a licensed Asbestos Inspector can collect the samples.

Note 2: Only a licensed Asbestos Abatement Contractor can perform repair/removal.

Page 3 of 11

Management Planner Signature:

Date:



8-8-2019

**ATTACHMENT A - MANAGEMENT PLANNER RECOMMENDATIONS  
(OTHER THAN O&M and PREVENTIVE MEASURES)**

**INSTRUCTIONS:** The Management Planner (MP) is to complete this form for each school building that is subject to the three-year reinspection requirements of Section 19a-333-3 of the Regulations of Connecticut State Agencies, and the MP recommends a response action other than Operations and Maintenance and/or preventive measures.

The MP shall specify the name of the school, the nature of the recommendation (e.g. remove, repair), location of the asbestos-containing building material (ACBM) associated with the recommendation (e.g. cafeteria – roof drain insulation) and approximate quantity. Please use a separate entry when the management planner lists multiple recommendations for a single school. Attach as many forms to the prescribed form as necessary to list separate entries for multiple schools.

Name of School	MP Recommendation	Location/Type and Amount of ACBM
Wintergreen Interdistrict Magnet School	10 LF cracking. Remove and replace with non-ACM caulk.	Conference Room (113), Door Frame Caulk, 50 LF
	15 LF missing/cracking. Remove and replace with non- ACM materials.	Kitchen (151), Door Frame Caulk, 200 LF
	65 Tiles cracking/missing exposing mastic. Remove the damaged tiles and replace by new non-ACM tiles and mastic.	Cafeteria (117), 9" x 9" Floor Tile-red/tan & Associated Mastic, 2130 SF
	The entire caulk is cracking. Remove and replace with non- ACM caulk.	Cafeteria (117), Window Caulk, 120 LF
	20 LF cracking. Remove and replace with non-ACM materials.	Staff Lounge (117A), Window Caulk, 25 LF
	3 Tiles chipped exposing mastic. Repair using non-ACM epoxy.	East Corridor (152), 9" x 9" Floor Tile-green, red, tan & Associated Mastic, 1860 SF
	5 Tiles chipped exposing mastic. Repair using non-ACM epoxy.	West Corridor (153), 9" x 9" Floor Tile-green, red, tan & Associated Mastic, 1860 SF
	5 SF missing. Remove the mastic where the tiles are missing and cover by new by new non-ACM tiles and mastic.	Lab (122), 9" x 9" Floor Tile-tan & Associated Mastic, 740 SF
	The entire caulk is cracking. Remove and replace with non- ACM materials.	Lab (122), Window Caulk, 50 LF
	2 SF chipped/cracking. Repair the damage using non-ACM epoxy.	Lab (125), 9" x 9" Floor Tile-light green & Associated Mastic, 740 SF
	4 SF chipped/cracking. Repair the damage using non-ACM epoxy.	Lab (127), 9" x 9" Floor Tile-light grey & Associated Mastic, 740 SF
	The entire caulk is cracking. Remove and replace by non- ACM caulk.	Lab (127), Window Caulk, 25 LF
	5 LF missing/cracking. Remove & replace with non- ACM caulk.	Lab (127), Door Frame Caulk, 35 LF
	< 1 SF dents/chips exposing mastic. Repair the damage using non-ACM epoxy.	Lab (128), 9" x 9" Floor Tile-light grey & Associated Mastic, 740 SF

Note 1: Only a licensed Asbestos Inspector can collect the samples.

Note 2: Only a licensed Asbestos Abatement Contractor can perform repair/removal.

Page 4 of 11

Management Planner Signature:

Date:



8-8-2019

**ATTACHMENT A - MANAGEMENT PLANNER RECOMMENDATIONS  
(OTHER THAN O&M and PREVENTIVE MEASURES)**

**INSTRUCTIONS:** The Management Planner (MP) is to complete this form for each school building that is subject to the three-year reinspection requirements of Section 19a-333-3 of the Regulations of Connecticut State Agencies, and the MP recommends a response action other than Operations and Maintenance and/or preventive measures.

The MP shall specify the name of the school, the nature of the recommendation (e.g. remove, repair), location of the asbestos-containing building material (ACBM) associated with the recommendation (e.g. cafeteria – roof drain insulation) and approximate quantity. Please use a separate entry when the management planner lists multiple recommendations for a single school. Attach as many forms to the prescribed form as necessary to list separate entries for multiple schools.

Name of School	MP Recommendation	Location/Type and Amount of ACBM
Wintergreen Interdistrict Magnet School	The entire caulk is cracking. Remove and replace with non- ACM materials.	Lab (128), Window Caulk, 25 LF
	The entire caulk is cracking. Remove and replace with non- ACM caulk.	Office (129), Window Caulk, 25 LF
	4 LF missing/cracking. Remove & replace with non- ACM caulk.	Office (129), Door Frame Caulk, 35 LF
	25 LF cracking. Remove and replace with non- ACM caulk.	Computer Room (130), Window Caulk, 25 LF
	2 LF cracking. Remove & replace with non- ACM caulk.	Computer Room (130), Door Frame Caulk, 35 LF
	The entire caulk is cracking. Remove and replace with non- ACM caulk.	Student Lounge (131), Window Caulk, 50 LF
	The entire caulk is cracking. Remove and replace with non- ACM caulk.	Classroom (133), Window Caulk, 25 LF
	< 1 LF cracking. Repair with spackling compound.	Classroom (133), Door Frame Caulk, 35 LF
	40 LF missing/cracking. Remove and replace with non- ACM caulk.	Classroom (134), Window Caulk, 50 LF
	4 LF missing/cracking. Remove & replace with non- ACM caulk.	Classroom (134), Door Frame Caulk, 35 LF
	The entire caulk is cracking. Remove and replace with non- ACM caulk.	Classroom (135), Window Caulk, 25 LF
	20 LF cracking. Remove and Replace with non- ACM caulk.	Classroom (136), Window Caulk, 25 LF
	20 LF cracking. Remove and replace with non- ACM caulk.	Lab (137), Window Caulk, 25 LF
	20 LF cracking. Remove and replace with non- ACM caulk.	Office (138), Window Caulk, 25 LF

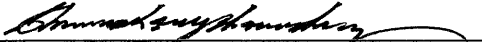
Note 1: Only a licensed Asbestos Inspector can collect the samples.

Note 2: Only a licensed Asbestos Abatement Contractor can perform repair/removal.

Page 5 of 11

Management Planner Signature:

Date:



8-8-2019



**ATTACHMENT A - MANAGEMENT PLANNER RECOMMENDATIONS  
(OTHER THAN O&M and PREVENTIVE MEASURES)**

**INSTRUCTIONS:** The Management Planner (MP) is to complete this form for each school building that is subject to the three-year reinspection requirements of Section 19a-333-3 of the Regulations of Connecticut State Agencies, and the MP recommends a response action other than Operations and Maintenance and/or preventive measures.

The MP shall specify the name of the school, the nature of the recommendation (e.g. remove, repair), location of the asbestos-containing building material (ACBM) associated with the recommendation (e.g. cafeteria – roof drain insulation) and approximate quantity. Please use a separate entry when the management planner lists multiple recommendations for a single school. Attach as many forms to the prescribed form as necessary to list separate entries for multiple schools.

Name of School	MP Recommendation	Location/Type and Amount of ACBM
Wintergreen Interdistrict Magnet School	The entire caulk is cracking. Remove and replace with non- ACM caulk.	President's Office (139A), Window Caulk, 50 LF
	The entire caulk is cracking. Replace with non- ACM caulk.	Bookstore (140), Window Caulk, 50 LF
	1 Tiles missing exposing mastic, 1 tile loose. Remove the damaged materials and replace by new non-ACM tiles and mastic.	Vestibule (236), 9" x 9" Floor Tile-green & Associated Mastic, 790 SF
	20 Tiles cracking/chipping/loose. Remove the damaged tiles/mastic and replace by new non- ACM tiles and mastic.	Connecting Passage (237), 12" x 12" Floor Tile-brown & Associated Mastic, 710 SF
	70 LF cracking. Remove and replace with non- ACM caulk.	Connecting Passage (237), Window Caulk, 200 LF
	20 LF cracking. Remove and replace with non- ACM caulk.	Library (200), Window Caulk, 200 LF
	< 1 SF chips/dents. Repair the damage using non-ACM epoxy.	East Corridor (238), 12" x 12" Floor Tile-tan & Associated Mastic, 1030 SF
	40 LF cracking. Remove and replace with non- ACM caulk.	East Corridor (238), Window Caulk, 50 LF
	30 SF water damage. Monitor the condition. Remove if the condition deteriorates and replace by new non-ACM tiles and mastic.	West Corridor (239), 12" x 12" Floor Tile-tan & Associated Mastic, 1030 SF
	< 1 SF chips/dents. Repair the damage using non-ACM epoxy.	North Corridor (240), 12" x 12" Floor Tile-tan & Associated Mastic, 1180 SF
	60 LF cracking. Remove and replace with non- ACM caulk.	Classroom (201), Window Caulk, 80 LF
	< 1 SF chips/dents. Repair the damage using non-ACM epoxy.	Classroom (201), 12" x 12" Floor Tile-tan & Associated Mastic, 1220 SF
	5 LF cracking. Remove & replace with non- ACM caulk.	Classroom (201), Door Frame Caulk, 70 LF
	1 Tile missing, 2 tiles loose. Cover the exposed spot with new non-ACM tile. Adhere the loose tile with epoxy.	Projection Booth (201B), 12" x 12" Floor Tile-tan & Associated Mastic, 110 SF

Note 1: Only a licensed Asbestos Inspector can collect the samples.

Note 2: Only a licensed Asbestos Abatement Contractor can perform repair/removal.

Page 6 of 11

Management Planner Signature:

Date:



8-8-2019

**ATTACHMENT A - MANAGEMENT PLANNER RECOMMENDATIONS  
(OTHER THAN O&M and PREVENTIVE MEASURES)**

**INSTRUCTIONS:** The Management Planner (MP) is to complete this form for each school building that is subject to the three-year reinspection requirements of Section 19a-333-3 of the Regulations of Connecticut State Agencies, and the MP recommends a response action other than Operations and Maintenance and/or preventive measures.

The MP shall specify the name of the school, the nature of the recommendation (e.g. remove, repair), location of the asbestos-containing building material (ACBM) associated with the recommendation (e.g. cafeteria – roof drain insulation) and approximate quantity. Please use a separate entry when the management planner lists multiple recommendations for a single school. Attach as many forms to the prescribed form as necessary to list separate entries for multiple schools.

Name of School	MP Recommendation	Location/Type and Amount of ACBM
Wintergreen Interdistrict Magnet School	60 LF cracking. Replace with non- ACM materials.	Office (202), Window Caulk, 70 LF
	60 LF cracking. Remove and replace with non- ACM caulk.	Lab (203), Window Caulk, 70 LF
	60 LF cracking. Remove and replace with non- ACM caulk.	Lab (204), Window Caulk, 70 LF
	< 1 SF chips/dents. Repair the damage using non-ACM epoxy.	Lab (204), 9" x 9" Floor Tile-light green & Associated Mastic, 1220 SF
	2 SF holes/chips exposing mastic. Repair the damage using non-ACM epoxy.	Lab (205), 12" x 12" Floor Tile-tan & Associated Mastic, 1220 SF
	The entire caulk is cracking. Remove and replace with non- ACM caulk.	Lab (205), Window Caulk, 25 LF
	4 LF cracking/missing. Remove & replace with non- ACM caulk.	Lab (206), Door Frame Caulk, 35 LF
	40 LF cracking. Remove and replace with non- ACM caulk.	Video Conference Center (207), Window Caulk, 50 LF
	15 LF missing/cracking. Remove & replace with non- ACM caulk.	Video Conference Center (207), Door Frame Caulk, 105 LF
	< 1 SF chips/dents. Repair the damage using non-ACM epoxy.	Office (208), 12" x 12" Floor Tile-tan & Associated Mastic, 500 SF
	15 SF cracking/missing. Remove and replace with non- ACM caulk.	Office (208), Door Frame Caulk, 35 LF
	< 1 SF chipped. Repair the damage using non- ACM epoxy.	Office (208D), 12" x 12" Floor Tile-tan & Associated Mastic, 100 SF
	The entire caulk is cracking. Remove and replace with non- ACM caulk.	Lab (209), Window Caulk, 25 LF
	The entire caulk is cracking. Replace with non- ACM caulk.	Lab (210), Window Caulk, 25 LF

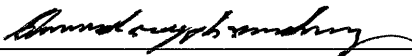
Note 1: Only a licensed Asbestos Inspector can collect the samples.

Note 2: Only a licensed Asbestos Abatement Contractor can perform repair/removal.

Page 7 of 11

Management Planner Signature:

Date:



8-8-2019

**ATTACHMENT A - MANAGEMENT PLANNER RECOMMENDATIONS  
(OTHER THAN O&M and PREVENTIVE MEASURES)**

**INSTRUCTIONS:** The Management Planner (MP) is to complete this form for each school building that is subject to the three-year reinspection requirements of Section 19a-333-3 of the Regulations of Connecticut State Agencies, and the MP recommends a response action other than Operations and Maintenance and/or preventive measures.

The MP shall specify the name of the school, the nature of the recommendation (e.g. remove, repair), location of the asbestos-containing building material (ACBM) associated with the recommendation (e.g. cafeteria – roof drain insulation) and approximate quantity. Please use a separate entry when the management planner lists multiple recommendations for a single school. Attach as many forms to the prescribed form as necessary to list separate entries for multiple schools.

Name of School	MP Recommendation	Location/Type and Amount of ACBM
Wintergreen Interdistrict Magnet School	2 LF missing/cracking. Remove & replace with non- ACM caulk.	Office (211), Door Frame Caulk, 35 LF
	50 LF cracking. Remove and replace with non-ACM materials.	Office (212), Window Caulk, 60 LF
	15 LF missing/cracking. Remove and replace with non- ACM caulk.	Office (213), Door Frame Caulk, 35 LF
	The entire caulk is cracking. Remove and replace with non- ACM caulk.	Lab (214), Window Caulk, 25 LF
	15 LF cracking. Remove and replace with non-ACM materials.	Lab (216), Window Caulk, 25 LF
	< 1 SF chips/dents. Repair the damage using non-ACM epoxy.	East Corridor (245), 9" x 9" Floor Tile-green, red, tan & Associated Mastic, 2590 SF
	< 1 SF chips/dents. Repair the damage using non-ACM epoxy.	Classroom (220), 9" x 9" Floor Tile-light green & Associated Mastic, 740 SF
	20 LF cracking. Remove and replace with non-ACM caulk.	Classroom (220), Window Caulk, 25 LF
	5 LF cracking/missing. Remove & replace with non- ACM caulk.	Classroom (220), Door Frame Caulk, 35 LF
	< 1 SF chips/dents. Repair the damage using non-ACM epoxy.	Classroom (221), 9" x 9" Floor Tile-light green & Associated Mastic, 740 SF
	20 LF cracking. Replace with non- ACM materials.	Classroom (221), Window Caulk, 25 LF
	1 Tile missing, 2 tiles chipped exposing mastic. Cover the mastic where the tile is missing by new non-ACM tile. Repair the damaged tile by non-ACM epoxy.	Classroom (222), 9" x 9" Floor Tile-tan & Associated Mastic, 740 SF
	25 LF cracking. Remove and replace with non-ACM caulk.	Classroom (222), Window Caulk, 25 LF
	4 LF cracking/missing. Remove & replace with non- ACM caulk.	Storage (222A), Door Frame Caulk, 35 LF

Note 1: Only a licensed Asbestos Inspector can collect the samples.

Note 2: Only a licensed Asbestos Abatement Contractor can perform repair/removal.

Page 8 of 11

Management Planner Signature:

Date:



8-8-2019

**ATTACHMENT A - MANAGEMENT PLANNER RECOMMENDATIONS  
(OTHER THAN O&M and PREVENTIVE MEASURES)**

**INSTRUCTIONS:** The Management Planner (MP) is to complete this form for each school building that is subject to the three-year reinspection requirements of Section 19a-333-3 of the Regulations of Connecticut State Agencies, and the MP recommends a response action other than Operations and Maintenance and/or preventive measures.

The MP shall specify the name of the school, the nature of the recommendation (e.g. remove, repair), location of the asbestos-containing building material (ACBM) associated with the recommendation (e.g. cafeteria – roof drain insulation) and approximate quantity. Please use a separate entry when the management planner lists multiple recommendations for a single school. Attach as many forms to the prescribed form as necessary to list separate entries for multiple schools.

Name of School	MP Recommendation	Location/Type and Amount of ACBM
Wintergreen Interdistrict Magnet School	1 Tile missing, 4 tiles chipped exposing mastic. Cover the space where the tile is missing by new non-ACM tile. Repair the chipped tile by non-ACM epoxy.	Classroom (223), 9" x 9" Floor Tile-tan & Associated Mastic, 740 SF
	20 LF cracking. Remove and replace with non-ACM caulk.	Classroom (223), Window Caulk, 25 LF
	20 LF cracking. Replace with non- ACM materials.	Classroom (224), Window Caulk, 25 LF
	The entire caulk is cracking. Remove and replace with non- ACM caulk.	Classroom (225), Window Caulk, 25 LF
	20 LF cracking. Remove and replace with non-ACM caulk.	Classroom (226), Window Caulk, 50 LF
	4 LF cracking/missing. Remove & replace with non- ACM caulk.	Classroom (226), Door Frame Caulk, 35 LF
	7 Tiles missing by radiator. Remove the residual mastic and cover by new non-ACM tile and mastic.	Classroom (227), 9" x 9" Floor Tile-light green & Associated Mastic, 740 SF
	20 LF cracking. Remove and replace with non-ACM caulk.	Classroom (227), Window Caulk, 25 LF
	4 LF cracking/missing. Remove & replace with non- ACM caulk.	Classroom (227), Door Frame Caulk, 35 LF
	< 1 SF chipped, 2 tiles missing exposing mastic. Repair the chipped tile with epoxy. Remove the residual mastic and cover by new non-ACM tiles and mastic.	Classroom (228), 9" x 9" Floor Tile-light green & Associated Mastic, 740 SF
	15 LF cracking. Remove and replace with non-ACM caulk.	Classroom (228), Window Caulk, 25 LF
	5 LF cracking. Remove & replace with non-ACM caulk.	Classroom (228), Door Frame Caulk, 35 LF
	< 1 SF chipped exposing mastic. Repair the damage using non-ACM epoxy.	Classroom (229), 9" x 9" Floor Tile-tan & Associated Mastic, 740 SF
	15 LF cracking. Replace with non- ACM materials.	Classroom (229), Window Caulk, 25 LF

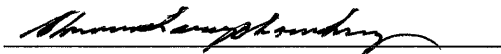
Note 1: Only a licensed Asbestos Inspector can collect the samples.

Note 2: Only a licensed Asbestos Abatement Contractor can perform repair/removal.

Page 9 of 11

Management Planner Signature:

Date:



8-8-2019

**ATTACHMENT A - MANAGEMENT PLANNER RECOMMENDATIONS  
(OTHER THAN O&M and PREVENTIVE MEASURES)**

**INSTRUCTIONS:** The Management Planner (MP) is to complete this form for each school building that is subject to the three-year reinspection requirements of Section 19a-333-3 of the Regulations of Connecticut State Agencies, and the MP recommends a response action other than Operations and Maintenance and/or preventive measures.

The MP shall specify the name of the school, the nature of the recommendation (e.g. remove, repair), location of the asbestos-containing building material (ACBM) associated with the recommendation (e.g. cafeteria – roof drain insulation) and approximate quantity. Please use a separate entry when the management planner lists multiple recommendations for a single school. Attach as many forms to the prescribed form as necessary to list separate entries for multiple schools.

Name of School	MP Recommendation	Location/Type and Amount of ACBM
Wintergreen Interdistrict Magnet School	4 LF cracking/missing. Remove & replace with non- ACM caulk.	Classroom (229), Door Frame Caulk, 35 LF
	< 1 SF chipped exposing mastic. Repair the damage using non-ACM epoxy.	Classroom (230), 9" x 9" Floor Tile-tan & Associated Mastic, 740 SF
	The entire caulk is cracking. Remove and replace with non- ACM caulk.	Classroom (230), Window Caulk, 25 LF
	< 1 SF dents/cracks. Repair the damage using non-ACM epoxy.	Classroom (231), 9" x 9" Floor Tile-light grey & Associated Mastic, 740 SF
	15 LF cracking. Remove and replace with non-ACM caulk.	Classroom (231), Window Caulk, 25 LF
	< 1 SF dents/cracks. Repair the damage using non-ACM epoxy.	Classroom (232), 9" x 9" Floor Tile-light grey & Associated Mastic, 740 SF
	15 LF cracking. Remove and replace with non-ACM materials.	Classroom (232), Window Caulk, 25 LF
	< 1 SF dents/cracks. Repair the damage using non-ACM epoxy.	Classroom (233), 9" x 9" Floor Tile-light green & Associated Mastic, 740 SF
	15 LF cracking. Remove and replace with non-ACM materials.	Classroom (233), Window Caulk, 25 LF
	< 1 SF dents/cracks. Repair the damage using non-ACM epoxy.	Classroom (234), 9" x 9" Floor Tile-light green & Associated Mastic, 740 SF
	15 LF cracking. Remove and replace with non-ACM caulk.	Classroom (234), Window Caulk, 25 LF
	4 LF missing/cracking. Remove & replace with non- ACM caulk.	Classroom (234), Door Frame Caulk, 35 LF
	15 LF cracking. Remove and replace with non-ACM caulk.	Classroom (235), Window Caulk, 25 LF
	1 Tile missing exposing mastic. Remove the residual mastic and cover by new non-ACM tile and mastic.	Stairwell A, 9" x 9" Floor Tile-green, red, tan & Associated Mastic (first floor landing only), 220 SF


Note 1: Only a licensed Asbestos Inspector can collect the samples.

Note 2: Only a licensed Asbestos Abatement Contractor can perform repair/removal.

Page 10 of 11

Management Planner Signature:

Date:



8-8-2019

**ATTACHMENT A - MANAGEMENT PLANNER RECOMMENDATIONS  
(OTHER THAN O&M and PREVENTIVE MEASURES)**

**INSTRUCTIONS:** The Management Planner (MP) is to complete this form for each school building that is subject to the three-year reinspection requirements of Section 19a-333-3 of the Regulations of Connecticut State Agencies, and the MP recommends a response action other than Operations and Maintenance and/or preventive measures.

The MP shall specify the name of the school, the nature of the recommendation (e.g. remove, repair), location of the asbestos-containing building material (ACBM) associated with the recommendation (e.g. cafeteria – roof drain insulation) and approximate quantity. Please use a separate entry when the management planner lists multiple recommendations for a single school. Attach as many forms to the prescribed form as necessary to list separate entries for multiple schools.

Name of School	MP Recommendation	Location/Type and Amount of ACBM
Wintergreen Interdistrict Magnet School	6 LF missing/cracking. Remove & replace with non- ACM caulk.	Stairwell B, Door Frame Caulk, 175 LF
	4 Tiles missing exposing mastic. Remove the residual mastic and cover by new non-ACM tile and mastic.	Stairwell D, 9" x 9" Floor Tile-green, red, tan & Associated Mastic, 120 SF
	80 LF cracking. Remove and replace with non-ACM caulk.	Stairwell E, Window Caulk, 80 LF
	2 LF cracking/missing. Remove & replace with non- ACM caulk.	Stairwell E, Door Frame Caulk, 80 LF
	80 LF cracking. Remove and replace with non-ACM caulk.	Stairwell F, Window Caulk, 80 LF


Note 1: Only a licensed Asbestos Inspector can collect the samples.

Note 2: Only a licensed Asbestos Abatement Contractor can perform repair/removal.

Page 11 of 11

Management Planner Signature:

Date:



8-8-2019

**AHERA INFORMATION PAGE (2.0)**

**AHERA INFORMATION PAGE****DATE: MAY 31, 2019****LOCAL EDUCATION AGENCY AND SCHOOL INFORMATION**

Local Education Agency:	Area Cooperative Educational Services	Telephone Number:	(203) 498-6800
Address:	350 State Street, North Haven, Connecticut		
Name of School:	Wintergreen Interdistrict Magnet School	Telephone Number:	
Address:	88 Bassett Road, North Haven, CT	County:	New Haven
Type of Facility:	K-12 Magnet School		
Does this building contain (check all that apply)			
<input checked="" type="checkbox"/> Friable ACBM			
<input checked="" type="checkbox"/> Non-Friable ACBM			
<input type="checkbox"/> Assumed Friable ACBM			
<input checked="" type="checkbox"/> Assumed Non-Friable ACBM			

**DESIGNATED PERSON INFORMATION**

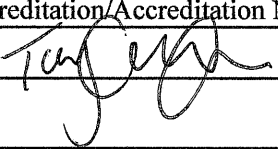
Name of Designated Person:	Mr. Timothy Gunn	Telephone Number:	(203) 498-6839
Address:	350 State Street, North Haven, Connecticut		

**TRAINING ATTENDED**

Course Name:	2 Hr Asbestos Awareness Course		
Training Agency:	Fuss & O'Neill EnviroScience, LLC	Date:	August 22, 2018
Place of Training:	146 Hartford Road Manchester, CT 06040	Hours of Training:	2 Hours

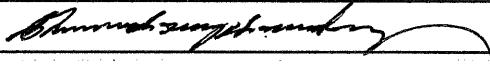
**INSPECTOR (s) / ASSESSOR (s)**

The following inspector(s) / assessor (s) has prepared this inspection report and assures that this report is in compliance with current law. The inspector(s) has been accredited by an EPA-approved course under section 206(6) of Title II of the Act. The Inspector (s) has also completed the written assessments of all friable ACBM, friable suspected ACBM assumed to be ACBM and thermal system insulation.

Name:	Taylor Carfiro	Telephone Number:	(860) 589-8257
Firm:	Eagle Environmental, Inc		
Address:	8 South Main Street, Suite 3, Terryville, Connecticut 06786		
State of Accreditation/Accreditation Number:	CT/001037		
Signature:			

**MANAGEMENT PLANNER (s)**

The following management planner(s) has developed this management plan and assures that this plan is in compliance with current law. The management planner(s) has been accredited by an EPA-approved course under section 206(6) of Title II of the Act.

Name:	Ashis Roychowdhury	Telephone Number:	860-589-8257
Firm:	Eagle Environmental, Inc		
Address:	8 South Main Street, Suite 3, Terryville, Connecticut 06786		
State of Accreditation/Accreditation Number:	CT/000108		
Signature:			



## **DESIGNATED PERSON STATEMENT OF ASSURANCE (3.0)**

**DESIGNATED PERSON STATEMENT OF ASSURANCE**  
**DPH 19a-333-2(g) and EPA 40 CFR 763.939(e)(7)**

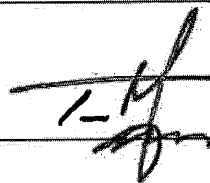
In accordance with the Regulations of State of Connecticut Department of Public Health (CTDPH) 19a-333-2(g) and 40 CFR 763.93(e)(7), the Local Education Agency (LEA) has used only persons accredited by an EPA approved course under section 206(c) of the Title II of AHERA and licensed by CTDPH to conduct inspections and prepare Management Plans. Furthermore, the LEA will use only persons accredited by an EPA approved course under section 206(c) of Title II of AHERA and licensed by CTDPH to design or carry out response actions, except for Operations and Maintenance, in the abatement of asbestos hazards.

The general LEA responsibilities under DPH 19a-333-2 and EPA 40 CFR 763.84 have been or will be met.

Local Education Agency: ACES

LEA Designated Person: Tim Gunn

Signature



Date

July 19, 2019

## **INITIAL & ADDITIONAL CLEANING REQUIREMENTS (4.0)**

## INITIAL & ADDITIONAL CLEANING REQUIREMENTS

The regulations require that unless the building has been cleaned using equivalent methods within the previous six (6) months, all areas of the school building where friable ACBM, damaged or significantly damaged thermal system insulation ACM, or friable suspected ACBM assumed to be ACM are present shall be cleaned at least once after the completion of the required initial inspection under section 19a-333-8(b)(1) of the regulations of Connecticut State Agencies and before initiation of any response action other than O&M activities or repair according to the following procedures:

- The floors and all horizontal surfaces shall be cleaned using HEPA-vacuum or wet-cleaning methods.
- All debris, filters, mop heads and cloths generated from the cleaning activity shall be disposed of in sealed, leak-tight containers.

### Initial Cleaning

- An initial cleaning has been performed in the facility in second and third weeks of June 2019. The cleaning was documented. Please see Appendix C for the letter.

### Additional Cleaning

- See the recommended response actions in Table B, Attachment B.

**Note:** Only properly trained personnel, using the equipment and methods prescribed in the operations and maintenance program of this plan, should undertake the cleaning specified above. All waste from cleaning should be disposed of as Asbestos Waste.

LEA Designated Person: \_\_\_\_\_  
Signature Date

## **SECTION B**

## **1.0 INTRODUCTION**

This initial inspection of asbestos-containing building materials (ACBM) at Wintergreen Interdistrict Magnet School located at 88 Bassett Road in North Haven, Connecticut was conducted in accordance with the State of Connecticut Department of Public Health (CTDPH) Regulation regarding Asbestos-Containing Materials in Schools (19a-331-1 through 19a-333-13) and the Asbestos Hazard Emergency Response Act (AHERA) 40 CFR 763.85 (b). During the inspection, the following required tasks were performed.

1. A visual inspection and assessment of all friable known or assumed ACBM.
2. The collection of limited bulk samples of suspect ACBM.
3. Identification and assessment of “Homogeneous Areas” and “Functional Spaces”.

Delta Environmental Services, Inc. (Delta) performed an asbestos inspection of the building in 2002 for the State of Connecticut Department of Public Works to put in place an asbestos management plan. Delta also collected samples of various suspect asbestos-containing materials. Eagle reviewed this report of May 2002 to avoid duplication of sampling. Prior to Delta’s inspection, EnviroMed Services, Inc. (EnviroMed) and Applied Thermodynamics collected samples of the building materials for asbestos in 1994 and 1997 respectively. Delta integrated the results from these sampling in their report. A copy of the report is attached as Attachment A.

## **2.0 BUILDING AND MECHANICAL SYSTEM DESCRIPTION**

Wintergreen Interdistrict Magnet School (formerly Gateway Community College North Haven Campus), consists of a single 162,000 square feet three-story building constructed in 1968. It was originally built as a junior high school and then was converted to house the college. It will now be used as new Wintergreen Interdistrict Magnet School. The building is of concrete and steel construction and consists of classrooms, offices, an auditorium, library and cafeteria. The interior finishes in the building primarily consist of vinyl floor tile or carpet over concrete floors, lay-in suspended tile ceilings and concrete block/sheetrock walls.

## **3.0 INSPECTION REPORT**

### **3.1 Introduction**

An AHERA initial inspection or re-inspection must be conducted by a Connecticut licensed Asbestos Inspector or Asbestos Inspector/Management Planner. Once an AHERA inspection is complete, the inspector must submit the results to the LEA in an inspection report. There are two elements to an AHERA inspection: identification and physical assessment.

Ms. Taylor Carfiro of Eagle Environmental, Inc. performed the inspection on May 30 and 31, 2019. Ms. Carfiro is an accredited Asbestos Inspector in the State of Connecticut (License No. 001037).

### **3.2 Identification of ACBM**

The inspection to identify all the ACBM in a school building begins with locating and listing all “homogeneous areas” and “functional spaces” of materials that are suspected to contain asbestos. A “homogeneous area” is an area of surfacing material, thermal system insulation or miscellaneous material that is uniform in color and texture. Suspected ACBM in a homogeneous area must be treated as ACBM unless samples are collected and analyzed to prove that the material is not an ACBM. A “functional space” means a room, a group of rooms, or spaces in a building that have identical functional uses.

### *Homogeneous Areas*

Interior homogeneous areas/ materials suspected of being ACBM must be categorized as one of the following:

1. Surfacing Material
2. Thermal System Insulation
3. Miscellaneous Material

Once a material is classified as a particular type, the inspector shall identify areas where the materials are all of one type.

Eagle Environmental inspector performed a walkthrough inspection of the buildings to identify and record "homogenous areas". The information is listed in Attachment B, Table A: Homogeneous Areas.

### *Functional Spaces*

Once the inspector has identified the homogeneous areas in a building, he/she must gather information that will tie each area to the uses or functions occurring within it. Under the AHERA regulation, a "functional space" means a room, a group of rooms, or spaces in a building that have identical functional uses. Examples of functional spaces are classrooms, hallways, offices, mechanical rooms, tunnels, crawl spaces etc.

Eagle Environmental inspector identified "functional spaces" in the building and recorded the ACBM existing within these functional spaces. The information is listed in Attachment B, Table B: Functional Spaces.

### *Bulk Sampling*

Under the AHERA regulation, all materials suspected to be ACBM must be assumed to be ACBM unless:

1. The homogeneous area is sampled in accordance with Section 763.86 of the AHERA rule and the samples were analyzed as required by Section 763.87 of the AHERA Rule and found to be non-asbestos; or
2. The suspect ACBM is in a building that is constructed after October 12, 1988 that is certified by the architect or project manager as being asbestos free.

Delta Environmental Services, Inc. (Delta) performed an asbestos inspection of the building in 2002 for the State of Connecticut Department of Public Works. Delta also collected samples of various suspect asbestos-containing materials. Eagle reviewed this report to avoid duplication of sampling.

Eagle Environmental collected sixteen (16) additional bulk samples during this inspection. All the materials sampled were determined to be non-ACM. The results are tabulated as follows:

Suspect Material Description	Sample Location(s)	Sample ID(s)	Sample Results
6" Cove base – black	117, 220	01, 02	NAD
6" Cove base – grey	113	03, 04	NAD

<b>Suspect Material Description</b>	<b>Sample Location(s)</b>	<b>Sample ID(s)</b>	<b>Sample Results</b>
6" Cove base – maroon	133, 134	05, 06	NAD
4" Cove base – black	140, 141	07, 08	NAD
4" Cove base – maroon	200, 113A	09, 10	NAD
Tackboard adhesive – yellow	113A, 200A	11, 12	NAD
Bottom layer plaster on concrete – white	207	13, 14	NAD
Top layer skim coat on plaster – white	207	15, 16	NAD

NAD = No asbestos detected.

Sample location diagram is attached as Attachment C. Bulk sample laboratory results are attached as Attachment D. Laboratory Certification is attached as Appendix I.

Based on the walkthrough inspection of the facilities and the sample results, the following ACBM were identified in the Wintergreen Interdistrict Magnet School:

- 12" x 12" Floor Tile-brown & Associated Mastic
- 12" x 12" Floor Tile-tan & Associated Mastic
- 9" x 9" Floor Tile & Associated Mastic
- Floor Tile Mastic (assumed to exist under carpet)
- 9" x 9" Floor Tile-green & Associated Mastic
- 9" x 9" Floor Tile-green, red, tan & Associated Mastic
- 9" x 9" Floor Tile-light green & Associated Mastic
- 9" x 9" Floor Tile-light grey & Associated Mastic
- 9" x 9" Floor Tile-red/tan & Associated Mastic
- 9" x 9" Floor Tile-tan & Associated Mastic
- Boiler Insulation (under jackets of 3 boilers)
- Door Frame Caulk
- Duct Insulation
- Old Floor Tile Mastic (under levelastic)
- Pipe Fitting Insulation (some above ceiling)
- Sink Undercoating-white (assumed to be ACBM)
- Window Caulk

Delta inspection report identified the following materials as non-ACM:

- Wall and ceiling plaster
- Sheetrock and joint compound
- Glue daub under ceiling tiles
- 2'x2' Suspended ceiling tile
- 2'x4' Suspended ceiling tile
- 1'x1' Acoustic wall tile-light gray with white face



- 1'x1' Acoustic wall tile-gray with off-white face
- Acoustical board
- Acoustical wall panel
- Spray-on beam insulation
- Baseboard molding adhesive
- Window glazing
- Molding insulation strip behind radiator
- Brown caulk at brick wall joint
- Brown 12"x12" floor tile
- Ductwork joint caulk
- Boiler breeching
- Caulk at boiler flue
- Jacket over fiberglass pipe insulation
- Tan 12"x12" floor tile with gray and tan mastic
- Bright pink/burgundy 12"x12" floor tile and associated mastic
- Off-white with gray marbled 12"x12" floor tile and associated mastic
- Off-white with black streaks 9"x9" floor tile
- Bright red with white streak 9"x9" floor tile
- Pink/burgundy 12"x12" floor tile and associated mastic
- Solid tan 12"x12" floor tile and associated mastic
- Gray with red spec 12"x12" floor tile and associated mastic
- Off-white with white and gray streaks 12"x12" floor tile and associated mastic
- Gray 12"x12" stone pattern floor tile and associated mastic
- Brown marble 12"x12" floor tile and associated mastic
- Spray-on fireproofing\*

\*This material may contain vermiculite

Eagle's bulk sampling identified the following materials as non-ACM:

- 6" Black cove base
- 6" Grey cove base
- 6" Maroon cove base
- 4" Black cove base
- 4" Maroon cove base
- Yellow tackboard adhesive
- Plaster on concrete-bottom layer rough coat\*
- Plaster on concrete-top layer skim coat\*

\*These were additional samples beyond what Delta collected of the materials to comply with the regulatory requirements.

The following material was assumed to be asbestos-containing:

- Sink undercoat

AHERA regulation only covers interior ACM (with the exception of covered exterior walkway connecting two buildings and the rooftop air handling units serving conditioned air inside the building); therefore exterior suspect asbestos-containing materials (ACM) were not inspected or assessed.

### 3.3 Physical Assessment of ACMB

During inspection, suspect ACMB was separated into three USEPA categories. These categories are thermal system insulation (TSI), surfacing ACMB, and miscellaneous ACMB. TSI includes all materials used to prevent heat loss or gain or water condensation on mechanical systems. Examples of TSI are pipe insulation, boiler insulation, duct insulation, and mudded insulation on pipe fittings. Surfacing ABCM is commonly used for fireproofing, decorative, and acoustical applications. Miscellaneous materials include all ABCM not listed in TSI or surfacing, such as linoleum, vinyl asbestos flooring, and ceiling tiles.

Finally, all ACMB is quantified in linear and square footage, depending on the nature of the material.

After the suspect ACMB were identified and categorized, the inspector conducted a physical assessment of the materials. The materials were classified into one of the following seven Physical Assessment Categories:

- 1 = Damaged or significantly damaged TSI ACMB
- 2 = Damaged friable surfacing ACMB
- 3 = Significantly damaged friable surfacing ACMB
- 4 = Damaged or significantly damaged friable miscellaneous ACMB
- 5 = ACMB with potential for damage
- 6 = ACMB with potential for significant damage
- 7 = Any remaining friable ACMB or friable suspected ACMB

The physical assessment includes the following considerations:

- a. Location and amount of the material
- b. Condition of the material, specifying
  - type of damage
  - severity of damage
  - extent of damage
- c. Whether the material is accessible
- d. Material's potential for disturbance
- e. Preventive measures that might eliminate the likelihood of undamaged ACMB from being damaged or significantly damaged

Physical assessment conditions have been noted in the "condition" column in Table B: Functional Spaces.

## 4.0 **MANAGEMENT PLAN UPDATE**

Once the accredited inspector has identified the ACMB in the building and has documented this information, an accredited Management Planner uses the information to conduct a risk assessment of the ACMB and prepares the Management Plan so that the response actions relative to the condition of the ACMB can be designed.

Mr. Ashis Roychowdhury, an accredited Management Planner in the State of Connecticut, (License No. 000108), prepared the Management Plan.

### 4.1 Recommended Response Actions

1. Removal

Please see Recommended Response Action in Table B, Attachment B for details.

2. Repair

Please see Recommended Response Action in Table B, Attachment B for details.

3. Enclosure

Not Applicable

4. Encapsulation

Not Applicable

5. Operations and Maintenance

All the ACBM identified in the school shall be placed in an Operations and Maintenance Program. The condition of such materials will be monitored until all the ACBM have been removed from the building. The program will include periodic surveillance inspections to maintain the effectiveness of the program. Please see Appendix B for Periodic Surveillance Forms and Appendix A for Operation and Maintenance Procedures for various ACBM.

It should be noted that only locations with Physical Assessment Category 1 through 4 are recommended for removal or repair. The remaining materials in this building should be addressed with continued operations and maintenance surveillance.

4.2 AHERA 3-Year Re-inspections

- A. At least once every three (3) years after the management plan is in effect, the LEA will conduct a re-inspection of all friable and non-friable known or assumed ACBM in each school building.
- B. Re-inspection shall be performed by a Licensed Asbestos Inspector. For each area of a school building the Inspector shall:
  - 1. Visually re-inspect and reassess the condition of all friable known or assumed ACBM.
  - 2. Visually inspect material that was previously considered non-friable and touch the material to determine whether it has become friable since the last inspection or re-inspection.
  - 3. Identify any homogenous areas in which material has become friable since the last inspection or re-inspection
  - 4. Bulk samples may be collected and submitted for analysis for any homogenous area of newly friable material that is already assumed to be ACBM.
  - 5. Performed a physical assessment, in accordance with 763.88 of the AHERA rule, of the condition of the newly friable material in areas where samples are collected and of newly friable materials in areas assumed to be ACBM.

6. Reassess the condition of friable known or assumed ACBM previously identified.
- C. As part of the three (3) year Re-inspection, a licensed Asbestos Management Planner shall recommend response actions based on the inspectors results.
- D. The three year re-inspection report will be placed in this section of the management plan

#### 4.3 AHERA 6-Month Periodic Surveillance

- A. At least once every six months after a management plan is in effect, the LEA must conduct periodic surveillance in each building that contains ACBM or is assumed to contain ACBM. The surveillance does not have to be conducted by an accredited and licensed inspector, but it should be conducted either by the LEA designated person (if he or she is trained) or by someone who is appropriately trained on asbestos (such as a maintenance person).
- B. Periodic surveillance involves a visual inspection of all areas that are identified in the management plan as ACBM or assumed ACBM. In evaluating each homogenous area, the person conducting the surveillance must visually inspect all areas identified in the management plan as ACBM or suspected ACBM and record whether there are any changes in the condition of the material (including if there are no changes). The date of the surveillance, the name of the person conducting the surveillance, and any change in condition of the ACBM or assumed ACBM must be documented and included in the management plan within a reasonable amount of time, such as 30 days from the periodic surveillance.
- C. Periodic surveillance shall utilize the forms provided in Appendix B and will be maintained in this section of the management plan.

Please see Appendix B for Periodic Surveillance Form.

#### 4.4 Annual Notification Letter

- A. The Designated Person is responsible for annually informing parents, guardians and employees of the availability of the asbestos management plan. This notification is to be documented and maintained in the AHERA Management Plan.
- B. Eagle Environmental, Inc. has provided a sample of a notification letter in Appendix C. This letter or similar is required to be sent out at the beginning of the school year and a dated copy included in this section.

Please see Appendix D for Annual Notification Letter.

#### 4.5 Notification to Short-Term Workers and Contractors

- A. The Designated Person is responsible for notifying short-term workers and contractors who come in contact with asbestos of:
  1. Locations of identified or suspected ACBM.
  2. The availability of the AHERA Management Plan

- B. The Designated Person will have the Asbestos Short-Term Worker and Contractor notice signed by the company and placed into the AHERA Management Plan.
- C. The “Asbestos Short-Term Worker and Contractor Notice” will be sent out and signed by contract vendors initially and annually depending if the same vendor/contractor shall be performing activities in the school facility for over a year.

Please see Appendix E for Notification Letter to Short-Term Workers and Contractors.

#### 4.6 Asbestos Emergency Response Actions

The following procedures will be followed when asbestos is accidentally disturbed or unexpectedly encountered during routine maintenance, renovation or demolition work.

##### 4.6.1 General

- A. Work will stop and the affected area immediately isolated with the required asbestos OSHA warning signs barrier tape.
- B. The Asbestos Designated Person shall be immediately notified.

The Asbestos Coordinator or the designated asbestos consultant will be notified immediately. The Designated Person will determine if air samples are needed to document air quality conditions. The HVAC system will be modified where possible when and where necessary.

##### 4.6.2 Minor Fiber Release Episode (<Square or Linear Feet of ACM)

- A. If the Designated Person recognizes only a minor problem, corrective measures will be performed under the Designated Person’s directions to allow for safe resumption of work. Modification of the HVAC system may be required.
- B. Many actions are available if a temporary disturbance has created minor debris. HEPA vacuuming and wet cleaning are necessary cleanup procedures. The Designated Person will make the O & M program required arrangements for the asbestos contractor to carry out these actions.
- C. If an unexpected asbestos containing material is discovered during renovation:
  - 1. Avoidance can be practiced where work flow is modified to avoid any contact or disturbance of the material.
  - 2. Enclosure, encapsulation or repair are always options to control a minor amount of asbestos containing material.
  - 3. Documentation of all actions is necessary.

##### 4.6.3 Major Fiber Release Episode (> 3 square feet or linear feet of ACM)

- A. If the Designated Person feels a significant problem (i.e. asbestos debris on floor, potential fiber release in the air) has been created by the disturbed

asbestos, all personnel will leave the area, the HVAC system will be modified. The area will then be secured from unauthorized entry and warning signs posted.

- B. The Designated Person will review the asbestos survey report for information.

Please see Appendix F for Abatement Action Form that shall be completed and maintained.

#### 4.7 Schedule and Resources Required for Implementation of Response Actions

1. Removal:

Please see Recommended Response Action in Table B, Attachment B for details.

2. Repair:

Please see Recommended Response Action in Table B, Attachment B for details.

3. Enclosure:

Not Applicable

4. Encapsulation:

Not Applicable

5. Operations and Maintenance Program

The cost for an Operations and Maintenance Program is dependent upon the how extensive the program is. A conservative estimate is \$600.00/year based upon periodic surveillance requirements.

#### 5.0 EPA CERTIFICATION REQUIREMENTS

The certificate and the licenses for Taylor Carfiro and Ashis Roychowdhury, involved in performing the re-inspection and updating the management plan are provided in Appendix G. The Designated Person's (Timothy Gunn) training certificate is also provided in Appendix H.

**ATTACHMENT A**

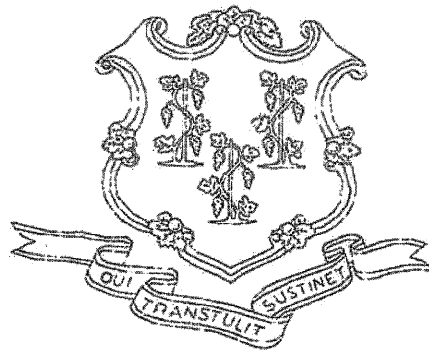
**DELTA ENVIRONMENTAL SERVICES REPORT**

ASBESTOS OPERATIONS AND MAINTENANCE PLAN  
GATEWAY COMMUNITY TECHNICAL COLLEGE

LONG WHARF CAMPUS  
NEW HAVEN, CONNECTICUT  
DPW Building No. 41758

NORTH HAVEN CAMPUS  
NORTH HAVEN, CONNECTICUT  
X DPW Building No. 46088

PROJECT NO. BI-CTC-392-F (ASB)



STATE OF CONNECTICUT  
DEPARTMENT OF PUBLIC WORKS

T.R. ANSON  
COMMISSIONER

PREPARED BY:

DELTA ENVIRONMENTAL SERVICES, INC.

MAY 2002



# MYSTIC EDUCATION CENTER OPERATIONS AND MAINTENANCE PROGRAM TABLE OF REVISIONS AND UPDATES

[illegible]

## TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
1.0 Introduction .....	1
1.1 Site Description .....	1
1.2 Description of Facility's Asbestos Handling Policy .....	2
2.0 Regulatory Summary .....	2
2.1 Connecticut Department of Public Health Regulations .....	2
2.2 Federal OSHA Regulations .....	3
2.3 Federal EPA Regulations .....	6
3.0 Summary of Asbestos Survey Findings .....	6
4.0 Operations and Maintenance (O&M) Plan Elements .....	8
4.1 Asbestos Program Manager .....	8
4.2 Hazard Communication .....	8
4.3 Training Requirements .....	10
4.4 Medical Surveillance .....	11
4.5 Respiratory Protection Program .....	12
4.6 Reinspection and Periodic Surveillance .....	12
4.7 Recordkeeping .....	13



## TABLE OF CONTENTS (CONTINUED)

<u>SECTION</u>	<u>PAGE</u>
5.0 Operations and Maintenance (O&M) Standard Work Practices .....	13
5.1 Work Order Permit System .....	13
5.2 Exposure Monitoring .....	14
5.3 Maintaining and Cleaning Vinyl Asbestos Tile .....	15
5.4 Procedures for Removal of Carpeting .....	15
5.5 Procedures for Asbestos Fiber Release Episodes .....	16
6.0 Summary of Operations and Maintenance Program .....	17
6.1 Summary of Survey Findings .....	17
TABLE 1 - SUMMARY OF RECOMMENDED ACTIONS FOR O&M PROGRAM ...	17a
6.2 O&M Program Implementation .....	18

## APPENDICES

APPENDIX A -	Glossary
APPENDIX B -	Example Recordkeeping Form for Periodic Surveillance
<b>APPENDIX C -</b>	<b>Completed Periodic Surveillance Forms</b>
APPENDIX D -	Asbestos Job Request/Work Authorization Form
<b>APPENDIX E -</b>	<b>Completed Job Request/Work Authorization Forms</b>
APPENDIX F -	Training Schedule
<b>APPENDIX G -</b>	<b>Personnel Training Records</b>
APPENDIX H -	DPW Asbestos Abatement Request Form 33
APPENDIX I -	Lead and Asbestos Survey Reports
<b>APPENDIX J -</b>	<b>Records of Asbestos Abatement Projects</b>

**NOTE: ITEMS IN BOLD TYPE REQUIRE REGULAR UPDATING BY ASBESTOS PROGRAM MANAGER!!**



## 1.0 INTRODUCTION

Gateway Community Technical College (Gateway) has implemented an Asbestos Operations and Maintenance (O&M) Program for its New Haven and North Haven campuses. The purpose of the program is to: ensure the safety of employees who may directly contact and/or work in the vicinity of asbestos-containing materials (ACM); and to minimize the exposure of all building occupants, visitors, maintenance and custodial personnel to airborne asbestos fibers. This document was created as a guideline for all participants in the program.

**The principal objective of the Asbestos Operations and Maintenance Program is to minimize the exposure of building occupants, visitors, maintenance and custodial personnel to airborne asbestos fibers by:**

- The survey, inventory and periodic reassessment of all asbestos-containing materials (ACM). The purpose of the periodic reassessment is to monitor the condition of ACM.
- Appointment of a properly trained Asbestos Program Manager/Competent Person to oversee all on-site activities involving ACM.
- Awareness training of building maintenance personnel and other individuals who may encounter ACM during their normal work activities.

### 1.1 Site Description

Gateway's Long Wharf campus is located at 60 Sargent Drive in New Haven and consists of a single two-story building constructed circa 1974. The building was originally built as a warehouse and was converted to house the college, which opened in 1976. The building has 140,623± square feet of gross floor area.

The building is of concrete and steel construction and consists of classrooms, offices and a large library and cafeteria on the ground floor. The interior finishes in the building generally consist of vinyl floor tile or carpet over concrete floors, lay-in suspended tile ceilings, and concrete block/sheetrock walls.



Gateway's North Haven campus is located at 88 Bassett Road and consists of a single three-story building constructed circa 1968. The building has 162,000± square feet of gross floor area.

The building is of concrete and steel construction and consists of classrooms, offices, an auto shop area, auditorium, library and cafeteria. The interior finishes in the building generally consist of vinyl floor tile or carpet over concrete floors, lay-in suspended tile ceilings, and concrete block/sheetrock walls.

## 1.2 Description of Facility's Asbestos Handling Policy

**The policy of Gateway Community Technical College is that facility personnel shall not handle asbestos materials. All asbestos abatement projects at the shall be conducted by Connecticut licensed asbestos abatement contractors.**

The policy applies to routine asbestos removal projects as well as cleanup of asbestos fiber release episodes. A description of the procedure to be followed in the event of an asbestos fiber release episode is contained in Section 5.5.

Asbestos abatement work at the facility will be coordinated with the Department of Public Works Asbestos Management Section. Facility personnel shall use the following procedure for requesting asbestos abatement services:

- Notify DPW of the reason for the request and the immediacy of action required (i.e. emergency or non-emergency). The Contact Person is:

Mr. John Wytas  
Phone: (860) 713-5702  
Fax: (860) 713-7250

- Complete DPW Form 33 (copy included in Appendix I) and fax it to DPW at (860) 713-7250.

## 2.0 REGULATORY SUMMARY

The following is a brief summary of selected State and Federal regulations pertinent to asbestos activities at Gateway. Specific recommendations concerning compliance with these regulations are included in Section 6.0 of this report.



## 2.1 Connecticut Department of Public Health (DPH) Regulations

Connecticut General Statutes Sections 19a-332a-1 through 19a-332a-16 outline specific requirements for asbestos abatement projects which are enforced by DPH. Asbestos abatement contractors who perform work at Gateway are subject to the regulations. In general, the regulations require: advance notification to DPH prior to initiation of any abatement project, posting of hazard signs and restricting access to abatement areas, specific engineering controls to prevent asbestos fiber release, post abatement air sampling to verify that the area is safe for reoccupancy, and disposal of asbestos waste at an authorized facility.

## 2.2 Federal Occupational Safety and Health Administration (OSHA) Regulations

The facility is subject to the OSHA Asbestos Standard for the Construction Industry (29 CFR 1926.1101). In the context of the standard, "construction" refers to "alteration, repair, maintenance, or renovation of structures, substrates, or portions thereof, that contain asbestos". The definition includes asbestos removal.

Though asbestos removal at Gateway is performed by outside contractors, it should be noted that the OSHA Construction Standard imposes specific hazard communication duties on facility owners and operators, as outlined in 29 CFR 1926.1101 (k). The standard requires identification of ACM (through a building survey) and hazard communication as discussed below.

The standard has specific requirements for various types of asbestos activities, which are divided into four work classes. Class I and II work involves asbestos removal. Class III activities are repair and maintenance operations where a small quantity (up to one standard glovebag) of asbestos is likely to be disturbed. Employees working at Gateway do not perform Class I, II or III activities.

Class IV work is defined as: maintenance and custodial activities during which employees contact but do not disturb asbestos; and activities to clean up dust, waste and debris resulting from Class I, II and III activities. Class IV activities performed at Gateway may include maintenance work involving contact without disturbance of asbestos-containing materials. These materials include vinyl floor tile and thermal systems insulation.

A summary of the requirements of the OSHA Construction Standard pertinent to Gateway follows:

- Identify asbestos-containing materials in the building as required by Section (k) (2) (I) of the regulation. This has been achieved through DELTA's recently completed asbestos survey reports.



- Post asbestos warning signs inside or at the entrance to mechanical rooms where ACM is present and where employees and outside contractors reasonably can be expected to enter. The signs should identify the specific ACM present and its location in the area. A listing of the areas requiring signs is provided in Table 1.
- As required by Section (k) (2) (ii) of the regulation, inform the following persons in writing of the presence, location and quantity of ACM in the building: employees who work in areas containing ACM; contractors bidding for work in areas containing ACM; other employers on multi-employer worksites with employees working in or adjacent to areas containing ACM; and tenants who occupy areas containing ACM. It appears that this requirement could be satisfied by informing the appropriate persons of the availability of this O&M plan.
- Designate a "competent person" (as defined by OSHA) to oversee work involving potential disturbance of asbestos and ensure that employees are properly protected. The "competent person" is required to have specific asbestos training. For facilities where employees perform Class IV operations, OSHA requires the competent person to have training consistent with EPA requirements for maintenance and custodial staff in school buildings. This training is 16 hours in duration and is commonly referred to as "O&M training".
- The "competent person" is required to perform "initial exposure assessments" for any asbestos operations performed by employees. The exposure assessment is typically made through personal air monitoring of workers to determine whether their exposure exceeds OSHA's permissible exposure limits (PEL). The initial exposure assessment is used to determine whether respiratory protection is required for the employee.

If the initial exposure assessment for a specific task determines that an employee's exposure will not exceed the PEL of 0.1 asbestos fibers per cubic centimeter over an 8 hour period (the "time-weighted average" or "TWA") or 1.0 asbestos fibers per cubic centimeter over a 30 minute period (the "excursion level"), the competent person may determine that personal air monitoring is not required for workers performing that task over the following year. This determination is called a negative exposure assessment and must use specific criteria to ensure that the air sampling data for the prior work will be representative of an employee's exposure while performing the same task at a later date.



In some cases, OSHA may allow the use of "objective data" in lieu of air monitoring as a means of conducting an exposure assessment. The "objective data" are required to demonstrate that "the product or material containing asbestos minerals or the activity involving such product or material cannot release airborne fibers in concentrations exceeding the TWA and excursion limit (the permissible exposure limits) under those work conditions having the greatest potential for releasing asbestos".

For work at Gateway involving buffing and cleaning of asbestos-containing vinyl floor tile, it may be feasible to use objective data to produce a negative exposure assessment. Specifically, adherence to the work procedures outlined in Section 5.3 could be used as a basis for a negative exposure assessment indicating that the tile would not release asbestos fibers at levels exceeding the TWA under these conditions.

- Provide two (2) hour awareness training for any maintenance employees and other employees who perform Class IV work. The training should be done by an EPA certified training provider.
- Provide annual medical surveillance for any employees exposed to asbestos at levels above the PEL and employees who are issued a negative pressure respirator (standard cartridge filter respirator). Any employees issued a powered air purifying respirator (PAPR) are not required to have medical surveillance unless they are exposed to asbestos at levels above the PEL. Based on DELTA's understanding of the typical work practices at Gateway, it does not appear that medical surveillance is required.
- Asbestos floor tile maintenance should be done using wet methods. Stripping should be done using low abrasive pads with the machine operated at speeds below 300 RPM. Burnishing and dry buffing should be done only with a coating of wax on the floor. Methods for maintenance of ACM tile are discussed in more detail in Section 5.3.

OSHA has developed a Respiratory Protection Standard (29 CFR 1910.134) applicable to all workplaces where respirators are issued or where they are necessary to protect employees. The Standard requires development and implementation of a written respiratory protection program including the following elements: procedures for respirator selection; medical evaluations of employees required to use respirators; fit testing procedures for tight-fitting respirators; procedures for respirator use; procedures for use of supplied air respirators where required; training of employees; and procedures for evaluating the effectiveness of the program.





Based on the nature of operations at Gateway, it does not appear likely that respiratory protection is necessary for employees performing Class IV work.

### 2.3 Environmental Protection Agency (EPA) Regulations

The National Emission Standards for Hazardous Air Pollutants (NESHAP) govern building renovation and demolition projects. The asbestos NESHAP standard is 40 CFR Part 61 Subpart M of the Clean Air Act. The standard requires: asbestos inspection of buildings planned for renovation or demolition; advance notification to EPA or DPH prior to the start of asbestos abatement projects; specific engineering controls and work practices for asbestos abatement; supervision of the work by trained personnel; asbestos waste manifest tracking; and waste disposal at a permitted facility.

## 3.0 SUMMARY OF ASBESTOS SURVEY FINDINGS

A summary of DELTA's findings for each of the two campuses is provided below.

### Long Wharf Campus

DELTA's survey of the Long Wharf Campus identified the following asbestos-containing materials in the building through analytical sampling: various types of 12" vinyl floor tile and mastic; older linoleum present beneath non-asbestos floor tile in the cafeteria; a small quantity of spackling putty applied to suspended ceiling tile in the boiler room at a pipe penetration; a small quantity of red HVAC duct sealant material on an air handler in the boiler room; and black exterior window glazing material.

The asbestos-containing floor tile is present in relatively limited areas of the building. The majority of tile in the building, including a white 12" tile with blue and grey streaks present throughout the main corridors on both floors, does not contain asbestos.

The asbestos-containing tile is generally exposed (not covered by carpeting or other material). The tile is generally in good condition, and is unlikely to present a hazard unless it is actively disturbed. Any future removal or replacement of the floor tile would have to be done as an asbestos abatement project involving removal and disposal of the tile and mastic as asbestos.

The cafeteria was found to have newer non-asbestos 12" tile over asbestos-containing linoleum. Any future removal or replacement of the floor tile in the cafeteria would have to be done as an asbestos abatement project if the asbestos-containing linoleum is disturbed through removal of the tile.



## North Haven Campus

The survey of the North Haven Campus identified the following asbestos-containing materials (ACM) in the building through analytical sampling: various types of floor tile and mastic throughout the building (including older 9" and newer 12"); pipe fitting insulation throughout the building (present with fiberglass pipe insulation); window frame caulk throughout the building; door frame caulk throughout the building; boiler insulation in the boiler room; and duct insulation in two second floor mechanical rooms.

Asbestos-containing floor tile is present throughout most of the building. The tile is generally exposed (uncovered), though there are some areas where asbestos-containing tile and mastic is present below carpet and floor leveling compound.

Domestic hot and cold water and heating system piping throughout the building is insulated with fiberglass. Some of the pipe elbows are insulated with fiberglass, though there are many older type mudded fittings which were found to contain asbestos. The majority of the accessible fittings are concealed above suspended ceilings. It is expected that a large number of additional fittings are enclosed behind concrete block walls.

### **4.0 OPERATIONS AND MAINTENANCE (O&M) PLAN ELEMENTS**

#### **4.1 Asbestos Program Manager**

The Asbestos Program Manager is a designated person responsible for implementing the O&M program and overseeing asbestos related activities in the facility. The position of Asbestos Program Manager is typically held by the building engineer or facilities manager. The Asbestos Program Manager should also fulfill the duties of the "competent person" required by the OSHA Construction Industry Standard to oversee work involving potential disturbance of asbestos and ensure that employees are properly protected.

For facilities such as Gateway where employees perform Class IV operations, OSHA requires the Competent Person to have training consistent with EPA requirements for maintenance and custodial staff in school buildings. This training is 16 hours in duration and is commonly referred to as "O&M training". It is desirable that the Asbestos Program Manager have additional training, such as Connecticut asbestos inspector/management planner training.



## 4.2 Hazard Communication

### 4.2.1 Signs and Labeling of Asbestos-Containing Materials (ACM)

A labeling program should be implemented to identify ACM in the facility's "routine maintenance areas", such as mechanical rooms. Table 1 contains a list of areas requiring signs. The signs should conform to the requirements of the OSHA Construction Standard Section (k) (6) including identification of the type of ACM present in the area and its specific location in the area.

It is recommended that the signs include the following text: DANGER-CONTAINS ASBESTOS FIBERS. CONTACT THE ASBESTOS PROGRAM MANAGER (GIVE NAME AND PHONE NUMBER) FOR APPROVAL PRIOR TO ANY WORK INVOLVING CONTACT WITH THE ASBESTOS MATERIALS.

Signs or labels are not required for some types of ACM if employee training and notification is accomplished in accordance with OSHA requirements. These types include: asbestos-containing floor tile, roofing and thermal systems insulation concealed above drop ceilings. All persons (including outside contractors) who may disturb or contact these materials must be advised in advance that they contain asbestos.

### 4.2.2 Contaminated Building Areas

OSHA requires that signs be posted restricting access to building areas that are contaminated with ACM debris where it has been demonstrated, or can reasonably be expected, that airborne asbestos fiber concentrations exceed the OSHA Permissible Exposure Limit (PEL). Such locations are known as "Regulated Areas". DELTA's April 2002 surveys did not identify any "Regulated Areas" at either campus. Periodic surveillance and reinspection procedures outlined in Section 4.6 should be implemented to monitor the condition of all ACM and promptly identify any areas where ACM becomes damaged, resulting in asbestos fiber release.

Fiber release episodes should be addressed in accordance with the procedures outlined in Section 5.5. **Fiber release episodes cannot be cleaned up by Gateway's in-house personnel.** Fiber release episodes must be addressed by a licensed asbestos abatement contractor. Fiber release episodes should be cleaned up as soon as possible. In the interim period between discovery and cleanup, the location where the release occurred is a "Regulated Area". Access to the area should be restricted and signs posted at all entrances. Regulated areas are required to be posted with signs containing the following text:



**DANGER**  
**ASBESTOS**  
**CANCER AND LUNG DISEASE HAZARD**  
**AUTHORIZED PERSONNEL ONLY**  
**RESPIRATORS AND PROTECTIVE CLOTHING**  
**ARE REQUIRED IN THIS AREA**

OSHA requires that signs also be posted restricting access to building areas that are contaminated with asbestos debris where fiber concentrations do not exceed the PEL. These signs should read as follows:

**WARNING**  
**AREA CONTAMINATED WITH ASBESTOS DEBRIS**  
**AVOID CREATING DUST**  
**AUTHORIZED PERSONNEL ONLY**

Any such areas should be cleaned up as soon as possible by a State licensed asbestos abatement contractor. In the interim, access to the contaminated building areas should be restricted.

**4.2.3     Awareness Program for Outside Contractors**

Contractors hired to do work at Gateway shall be informed by the on-site Asbestos Program Manager of the location of ACM in the work area to which they are assigned. Contractors shall, under no circumstances, damage or disturb ACM unless they are a licensed asbestos abatement contractor and have been specifically employed to perform asbestos removal.

The Asbestos Program Manager shall provide contractors with either a copy of the completed Asbestos Work Authorization Form (reference Appendix D) or a copy of specific sections of the asbestos survey report pertaining to the areas where the work will occur.

The Asbestos Program Manager shall caution contractors that they shall not proceed with any change in work without prior approval. It will be the responsibility of the contractor to provide their own asbestos awareness program which shall include the information contained in this section.



### 4.3 Training Requirements

#### 4.3.1 Custodial and Maintenance Training

All maintenance and custodial staff who perform duties involving potential contact with ACM but do not involve the removal or disturbance of ACM should receive two hours asbestos awareness training on an annual basis. Training will include:

1. Asbestos characteristics and typical uses of ACM.
2. Health effects of asbestos exposure and the combined effects of smoking and asbestos exposure.
3. Purpose of the Asbestos O&M Program.
4. Recognition of damaged ACM, and the response that should be made if damaged ACM or suspect ACM is found.
5. Summary of the types and locations of ACM in the building.

#### 4.3.2 Respirator Training

Any employees who wear respiratory protection shall receive training on respiratory protection and approved asbestos-related work practices and procedures. The training should include: an explanation of the importance of respirator use; proper procedures for inspection, use, maintenance and storage of the respirator; limitations of various types of respirators; and fit check procedures.

#### 4.3.3 Building Occupant Awareness

Employees should be made aware of the existence of the Asbestos O&M Program, and be provided access to this document upon request. Employees should be made aware that ACM may be present in their workplace, and be cautioned that ACM is not to be damaged or disturbed except under controlled conditions by trained personnel.

Prior to the start of an asbestos abatement project, additional information should be provided to building occupants that will explain the work that is to be performed, and the measures that are being employed to protect them. This information will be made available either at group meetings, or by letter, the use of media resources, or a combination of the above.



#### 4.4 Medical Surveillance

The OSHA Construction Standard requires that annual medical surveillance be provided to: employees who perform OSHA Class I, II or III work for a combined total of 30 or more days per year; employees exposed to asbestos at levels above the PEL; and employees who are issued a negative pressure respirator. As discussed previously, employees at Gateway do not perform Class I, II or III work.

Medical surveillance is required for employees issued a negative pressure respirator (standard cartridge filter respirator) in order to determine whether they are fit to wear it. Employees issued a powered air purifying respirator (PAPR) are not required to have medical surveillance unless their work meets one of the other conditions.

OSHA requires an exposure assessment be developed for any asbestos related tasks performed by employees, including Class IV work. It appears that respiratory protection may not be necessary for employees performing Class IV work (such as cleaning of vinyl floor tile) at the facility. If the exposure assessment confirms this, medical surveillance will not be required.

Medical surveillance involves: examination by a licensed physician including evaluation of pulmonary and gastrointestinal systems, including a chest roentgenogram to be administered at the discretion of the physician; and a standardized medical and work history questionnaire developed by OSHA.

#### 4.5 Respiratory Protection Program

As discussed in Section 2.2, OSHA has developed a Respiratory Protection Standard (29 CFR 1910.134) applicable to all workplaces where respirators are issued or where they are necessary to protect employees. For any employees who perform activities requiring respiratory protection, the Standard requires development and implementation of a written respiratory protection program including the following elements: procedures for respirator selection; medical evaluations of employees required to use respirators; fit testing procedures for tight-fitting respirators; procedures for respirator use; procedures for use of supplied air respirators where required; training of employees; and procedures for evaluating the effectiveness of the program.

Based on the nature of operations at Gateway, it does not appear that respiratory protection is necessary for employees performing Class IV work, though OSHA requires that an exposure assessment be developed to confirm this finding.



#### 4.6 Reinspection and Periodic Surveillance

It is recommended that all identified asbestos-containing materials in the building be reinspected at least once annually by the on-site Asbestos Program Manager. Any change in material condition shall be noted during this inspection and, if necessary, the relative hazard posed to building occupants by this material shall be assessed. If necessary, material repairs and/or minor abatement shall be performed at the first available opportunity to reduce or eliminate the hazard to building occupants.

A complete record of building inspections shall be maintained. A recordkeeping form for periodic surveillance is included in Appendix B. Completed forms should be kept with this O&M plan, in Appendix C.

#### 4.7 Recordkeeping

All records mentioned in this Asbestos O&M Program shall be retained as required by the regulations and as necessary to maintain an effective program. These records shall include:

- The written O&M plan itself, including all revisions, changes and modifications.
- All asbestos project (abatement, repair, encapsulation or enclosure) records including, as appropriate, survey records, project design or abatement specifications, air sampling data, daily project monitor logs, sign-in logs, waste disposal manifests, and invoices. The building area affected and material removed shall be clearly identified on the building drawings. Include information regarding abatement projects in Appendix J.
- Attendance records at all awareness and training programs (include in Appendix G).
- Medical surveillance records (if required) shall be maintained for 30 years past the last date of employment for an individual employee. Include any personal exposure monitoring (air sampling) data.

#### 5.0 OPERATIONS AND MAINTENANCE (O&M) STANDARD WORK PRACTICES

Standard work practices and procedures provide specific guidelines for certain asbestos-related work activities. Adherence to these practices will minimize the production of airborne asbestos fibers and will protect the worker and building occupants.



### 5.1 Work Order Permit System

No renovation or maintenance activity involving alteration of a building material should occur without prior review by the Asbestos Program Manager for the possibility of contact with or disturbance of ACM.

All personnel (including outside contractors) shall follow the guidelines of the Work Order Review System detailed in this document if they:

- Conduct maintenance, renovation or repair activities.
- Conduct work in asbestos contaminated work environments where deteriorated or damaged ACM may be present.
- Conduct any other work or operation that potentially impacts ACM.

A copy of the Asbestos Work Authorization Form shall be maintained at the work site throughout the course of the project. A copy of the form to be used is included in Appendix D. Completed forms should be kept with this document, in Appendix E.

#### 5.1.1 Purpose

The purpose of the work order review system is to allow the Asbestos Program Manager an opportunity to review all proposed renovation, maintenance or repair work that is to be completed internally by staff and/or outside contractors to insure that either:

- ACM will not be disturbed by the work
- Any damaged ACM present in the work area is repaired and the area cleaned before the work begins
- Suitable precautions are taken if the work has the potential to unintentionally disturb ACM (e.g. due to the physical configuration of the area and the location of the ACM in relation to the proposed work) or,
- The ACM that will be disturbed by the work is removed by a licensed asbestos abatement contractor under the supervision of a licensed Project Monitor hired for this purpose.





All ACM in the area of the work will be identified on the review form. When the work will be conducted in the vicinity of thermal system insulation (TSI), all ACM TSI in the immediate vicinity of the work area will be clearly identified with the OSHA "Danger" warning label, and non-ACM TSI with an "Asbestos Free" label as appropriate.

## 5.2 Exposure Monitoring

OSHA regulations require that "initial exposure assessments" be performed for any asbestos work by employees. As stated previously, the policy of Gateway is that facility personnel shall not handle asbestos. All asbestos abatement (OSHA Class I, II or III activities) must be conducted by licensed outside contractors. However, OSHA also requires exposure assessments for Class IV work (maintenance and custodial activities during which employees contact but do not disturb asbestos). Class IV activities performed at Gateway include maintenance and cleaning of vinyl floor tile.

In some cases, OSHA may allow the use of "objective data" in lieu of air monitoring as a means of conducting an exposure assessment. The "objective data" are required to demonstrate that "the product or material containing asbestos minerals or the activity involving such product or material cannot release airborne fibers in concentrations exceeding the TWA and excursion limit (the permissible exposure limits) under those work conditions having the greatest potential for releasing asbestos".

For work at Gateway involving buffing and cleaning of asbestos-containing vinyl floor tile, it may be feasible to use objective data to produce a negative exposure assessment. Specifically, adherence to the work procedures outlined in Section 5.3 could be used as a basis for a negative exposure assessment indicating that the tile would not release asbestos fibers at levels exceeding the TWA under these conditions.

### 5.2.1 Air Sampling During Asbestos Projects

For asbestos abatement projects in occupied buildings, the OSHA Construction Standard requires the employers of the occupants to "take steps on a daily basis to ascertain the integrity of the enclosure and/or the effectiveness of the control method relied on by the primary asbestos contractor". For Gateway, this will be accomplished by an on-site DPH licensed Project Monitor coordinated by the DPW Asbestos Program. The Project Monitor will collect air samples both inside and outside of the work area during the project. The Project Monitor will perform a final visual inspection when the work is complete and will secure final clearance air samples using air sampling techniques required by DPH.



Asbestos abatement contractors working at Gateway shall be responsible for securing air samples for their own personnel to meet the OSHA requirements. All air sampling results for abatement projects should be maintained on file at the facility.

### 5.3 Maintaining and Cleaning Vinyl Asbestos Tile

The survey found vinyl asbestos tile (VAT) flooring throughout much of the two campuses. Though this material is typically non-friable, the frictional forces exerted on it during routine floor maintenance operations can cause asbestos fibers to be released. The OSHA Construction Standard prohibits sanding of VAT and requires that stripping of finishes be conducted using wet methods and low abrasion pads at speeds lower than 300 RPM.

OSHA requires that burnishing or dry buffing be performed only on flooring which has sufficient finish so that the pad does not contact the tile. Personnel responsible for cleaning and maintaining vinyl asbestos tile should be given a minimum of two hours asbestos awareness training. The following additional measures are recommended for VAT maintenance:

- Perform stripping of tile finish coat as infrequently as possible (once per year if feasible). If possible, perform stripping when the building is unoccupied. As noted above, stripping should only be conducted only while the floor is wet using the least abrasive pad possible at speeds lower than 300 RPM.
- Prior to applying a finish coat to the tile, apply two to three coats of sealer. Continue to finish the floor with a high percent solid finish.
- If spray buffing or dry burnishing is used, always ensure that the floor has sufficient finish so that the pad does not contact the tile. Always operate the floor machine at the lowest rate of speed possible using the least abrasive pad possible.
- Use a wet mop for routine cleaning of finished floors whenever possible.
- Ensure that floor mats are used at all entrances during the winter months to reduce scuffing of the tile by sand and salt being tracked into the building.



#### 5.4 Procedures for Removal of Carpeting

For any building areas where carpet removal is planned, the asbestos survey information (included in the inventory tables in Appendix A of DELTA's survey reports) should first be checked. If ACM floor tile is present directly below the carpet, any removal of the carpet will likely have to be done as an asbestos abatement project, since it is probable that the tile would be disturbed in the process.

For areas where floor leveling compound is present (above the tile and below the carpet) it does not appear likely that the asbestos tile would be disturbed through removal of the carpet, and the carpet removal would therefore not constitute asbestos abatement.

Before removal of any carpet overlying ACM tile or mastic, the area should be checked by carefully lifting one corner of the carpet to determine whether the underlying ACM will be disturbed during the carpet removal process. If it appears that disturbance will occur, the carpet removal must be conducted under containment by a licensed asbestos abatement contractor.

#### 5.5 Procedures for Asbestos Fiber Release Episodes

A fiber release episode is the falling or dislodging of ACM. Any such incident must be cleaned up by a Connecticut Department of Public Health (DPH) licensed asbestos abatement contractor.

The procedures to follow in the event of a fiber release episode are outlined below.

##### 5.5.1 Fiber Release Episode General Procedures

- Restrict access to the area and post signs to prevent unauthorized entry.
- Notify the on-site Asbestos Program Manager immediately. He or she should contact the Department of Public Works Statewide Services Asbestos Program. Contact information is provided below:

Mr. John Wytas - Department of Public Works\*

Office Phone: (860) 713-5702

Cell Phone: (860) 539-2814

**\* This information is valid as of May 2002. Update as necessary!**

- Additional technical assistance can be provided by the Department of Public Health Asbestos Program. The phone number is (860) 509-7367.



- Shut off air handling systems to prevent the distribution of fibers to other areas of the building.
- Building evacuation is appropriate if it is believed that asbestos fibers have been distributed to occupied areas.
- **The response action ("cleanup") cannot be conducted by in-house personnel.** The response action for any major fiber release episode must be designed by a DPH licensed Project Designer and conducted by a licensed abatement contractor. A licensed Project Monitor is required to conduct air sampling after completion of the response action to verify that the area is safe for reoccupancy.

## 6.0 SUMMARY OF OPERATIONS AND MAINTENANCE PROGRAM

### 6.1 Summary of Survey Findings

Delta's survey of Gateway's Long Wharf Campus identified the following asbestos-containing materials in the building through analytical sampling: various types of 12" vinyl floor tile and mastic; older linoleum present beneath non-asbestos floor tile in the cafeteria; a small quantity of spackling putty applied to suspended ceiling tile in the boiler room at a pipe penetration; a small quantity of red HVAC duct sealant material on an air handler in the boiler room; and black exterior window glazing material.

The survey of Gateway's North Haven Campus identified the following asbestos-containing materials (ACM) in the building through analytical sampling: various types of floor tile and mastic throughout the building (including older 9" and newer 12"); pipe fitting insulation throughout the building (present with fiberglass pipe insulation); window frame caulk throughout the building; door frame caulk throughout the building; boiler insulation in the boiler room; and duct insulation in two second floor mechanical rooms.

### 6.2 O&M Program Implementation

The O&M program is designed to further reduce the risk of accidental disturbance of asbestos. The following is a summary of actions necessary to begin implementation of the O&M program.



**TABLE 1: RECOMMENDED RESPONSE ACTIONS  
FOR GATEWAY COMMUNITY TECHNICAL COLLEGE  
(IN ORDER OF PRIORITY)**

ITEM	ESTIMATED COST
<p>1. Post "Asbestos Hazard" signs in routine maintenance areas, including:</p> <p>1A. North Haven Campus Boiler Room</p> <p>1B. North Haven Campus Second Floor Mechanical Rooms 1 and 2 Near Auditorium</p> <p>(Post signs just inside door at all entrance points to room. Signs are discussed in Section 4.2.1 of the O&amp;M plan)</p>	---
<p>2. Appoint Asbestos Program Manager, Complete Personnel Training, and Implement Periodic Surveillance and other O&amp;M Program Elements (Summarized in Section 6.2 of the O&amp;M Plan)</p>	---



- Designate an Asbestos Program Manager to implement the O&M program and provide oversight of all asbestos related activities in the facility. The position of Asbestos Program Manager is typically held by the building engineer or facilities manager. The Asbestos Program Manager should also fulfill the duties of the "competent person" required by the OSHA Construction Industry Standard to oversee work involving potential disturbance of asbestos and ensure that employees are properly protected.

At a minimum, the Asbestos Program Manager should have training consistent with EPA requirements for maintenance and custodial staff in school buildings. This training is 16 hours in duration and is commonly referred to as "O&M training". It is desirable that the Asbestos Program Manager have additional training, such as asbestos inspector/management planner training. Implementation of a work order review system is recommended to allow the Program Manager the opportunity to review all proposed renovation, maintenance or repair work that is to be completed internally by staff and/or outside contractors.

- OSHA hazard communications regulations require that the following persons be informed in writing of the presence, location and quantity of ACM in the building: employees who work in areas containing ACM; contractors bidding for work in areas containing ACM; other employers on multi-employer worksites with employees working in or adjacent to areas containing ACM; and tenants who occupy areas containing ACM. It appears that this requirement could be satisfied by informing the appropriate personnel of the availability of this O&M plan.
- Ensure that two-hour asbestos awareness training is provided for building maintenance personnel including any employees responsible for cleaning/maintaining the exposed vinyl asbestos tile. The training should include annual refreshers. Utilize the standard work practice procedures for cleaning and maintaining vinyl asbestos tile as outlined in Section 5.3.
- OSHA regulations require that "initial exposure assessments" be performed for any asbestos work by employees. The policy of Gateway is that facility personnel shall not handle asbestos. All asbestos abatement (OSHA Class I, II or III activities) must be conducted by licensed outside contractors. However, OSHA also requires exposure assessments for Class IV work (maintenance and custodial activities during which employees contact but do not disturb asbestos). Class IV activities performed at Gateway include maintenance and cleaning of vinyl floor tile.



In some cases, OSHA may allow the use of "objective data" in lieu of air monitoring as a means of conducting an exposure assessment. The "objective data" are required to demonstrate that "the product or material containing asbestos minerals or the activity involving such product or material cannot release airborne fibers in concentrations exceeding the TWA and excursion limit (the permissible exposure limits) under those work conditions having the greatest potential for releasing asbestos".

For work at Gateway involving buffing and cleaning of asbestos-containing vinyl floor tile, it may be feasible to use objective data to produce a negative exposure assessment. Specifically, adherence to the work procedures outlined in Section 5.3 could be used as a basis for a negative exposure assessment indicating that the tile would not release asbestos fibers at levels exceeding the TWA under these conditions.

- It is recommended that all identified asbestos-containing materials in the building be reinspected at least once annually. Any change in material condition shall be noted during this inspection and, if necessary, the relative hazard posed to building occupants by this material shall be assessed.
- Place signs in routine maintenance areas where asbestos is present as required by the OSHA Construction Standard. The signs should identify the type of ACM present and its specific location in the area. The signs shall include the following text: DANGER. CONTAINS ASBESTOS FIBERS. AVOID CREATING DUST. CANCER AND LUNG DISEASE HAZARD. It is recommended that the signs also include a statement as follows: DO NOT DISTURB WITHOUT PROPER TRAINING AND EQUIPMENT. CONTACT THE ASBESTOS PROGRAM MANAGER (GIVE NAME AND PHONE NUMBER) FOR APPROVAL PRIOR TO ANY WORK INVOLVING TOUCHING OR DISTURBING THE ASBESTOS MATERIALS. Table 1 includes a list of areas requiring signs.



## **GLOSSARY OF TERMS PERTAINING TO ASBESTOS MANAGEMENT**

**Abatement:** Procedures to control fiber release from asbestos-containing materials including removal, encapsulation and enclosure.

**Accessible:** when referring to ACM, the material is subject to disturbance by building occupants or custodial or maintenance personnel in the course of their normal activities.

**ACM:** Asbestos-containing material. Defined as a material containing greater than one percent asbestos by volume per EPA Test Method 600 M/4 82-020.

**Action Level:** An airborne concentration of asbestos of 0.1 fiber per cubic centimeter of air (f/cc) calculated as an eight (8)-hour time-weighted average.

**Acoustical Insulation:** The general application or use of asbestos for the control of sound due to its lack of reverberant surfaces.

**Acoustical Tile:** A finishing material in a building usually found in the ceiling or walls for the purpose of noise control.

**Adequately Wet:** Sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from asbestos-containing material, then that material has not been adequately wet.

**Aggressive Sampling:** Air sampling which takes place after abatement and final clean-up while the air is being physically agitated to produce a "worst case" situation.

**AIHA:** American Industrial Hygiene Association

**AIHA Accredited Laboratory:** A certification given by the AIHA to an analytical laboratory that has successfully participated in the "Proficiency Analytical Testing" program for quality control as established by the National Institute for Occupational Safety and Health.

**Airborne Asbestos Analysis:** Determination of the amount of asbestos fibers suspended in a given amount of air.

**Aircell:** Pipe insulation with a fibrous, air-filled honeycomb center. This type of insulation typically contains asbestos.

**Air Diffuser:** A device designed to disperse an air stream throughout a given area.

**Air Erosion:** The passage of air over friable ACM which may result in the release of asbestos fibers.



**Air Lock:** A system of enclosures consisting of two polyethylene curtained doorways at least three feet apart that does not permit air movement between clean and contaminated areas.

**Air Monitoring:** The process of measuring the airborne fiber concentration of a specific quantity of air over a given amount of time.

**Air Plenum:** Any space used to convey air in a building or structure. The space above a suspended ceiling is often used as an air plenum.

**Alternative Work Practice (AWP) - State of Connecticut Department of Public Health** approved deviation from Asbestos Standards (Sections 19a-332a-1 to 19a-332a-16 inclusive). Alternative Work Practice methods may be used if pre-approved by DPH.

**Ambient Air:** The surrounding air or atmosphere in a given area under normal conditions.

**Amended Water:** Water to which a chemical wetting agent (surfactant) has been added to improve penetration into asbestos-containing materials that are being removed.

**Amosite:** An Asbestiform mineral of the amphibole group containing approximately 50% silicon and 40% Iron (II) Oxide, and is made up of straight, brittle fibers, light gray to pale brown in color.

**Amphibole:** One of the two major groups of minerals from which the Asbestiform minerals are derived, distinguished by their chain-like crystal structure and chemical composition.

**ANSI:** American National Standards Institute

**Approved Landfill:** A site for the disposal of asbestos-containing and other hazardous wastes that has been given EPA approval.

**Asbestiform Minerals:** Minerals which, due to their crystal structures and chemical composition, tend to be separated into fibers and can be classified as a form of asbestos.

**Asbestos:** Any of the following asbestiform minerals alone or in combination: chrysotile, amosite, crocidolite, tremolite, anthophyllite, actinolite, and any of these minerals that have been chemically treated and/or altered. Asbestos minerals are naturally occurring fibrous silicates.

**Asbestos-containing Waste Materials:** Regulated asbestos-containing material waste and materials contaminated with asbestos including disposable equipment and clothing, filters from control devices and bags or other similar packaging contaminated with commercial asbestos.

**Asbestos Control Area** - An area where asbestos abatement operations are performed which is isolated by physical boundaries which assist in the prevention of the uncontrolled release of asbestos dust, fibers, or debris. Two examples of an Asbestos Control Area are a "full containment" and a "glove-bag."

**Asbestos Debris:** Pieces of ACM that can be identified by color, texture, or composition, or means dust, if the dust is determined by an accredited inspector to be ACM.

**Asbestos Fibers:** Fibers with their length being greater than five microns (length to width ratio of 3:1), generated from an asbestos-containing material.

**Asbestosis:** A non-malignant, progressive, irreversible lung disease caused by the inhalation of asbestos dust and characterized by diffuse fibrosis.

**Asbestos Project:** Asbestos Abatement disturbing 3 linear or 3 square feet of ACM or more.

**Authorized Asbestos Disposal Facility** - A location approved by the Connecticut Department of Environmental Protection for handling and disposing of asbestos waste or by an equivalent regulatory agency if the material is disposed of outside the State of Connecticut.

**Bridging Encapsulant:** The application of a sealant over the surface of asbestos-containing material to prevent the release of asbestos fibers.

**Category I Nonfriable Asbestos-Containing Material (ACM):** Asbestos-containing packing, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy.

**Category II Nonfriable ACM:** Any material, excluding Category I nonfriable ACM, containing more than 1 percent asbestos as determined by using the methods specified in appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

**Cementitious:** Asbestos-containing materials that are densely packed, granular and are friable.

**CFM:** Cubic feet per minute.

**Chrysotile (White Asbestos):** The only asbestiform mineral of the serpentine group which contains approximately 40% each of silica and magnesium oxide. It is the most common form of asbestos used in buildings.

**Class I Asbestos Work** - Activities involving the removal of Thermal Systems Insulation (TSI) and surfacing ACM and PACM.

**Class II Asbestos Work** - Activities involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastic.

**Class III Asbestos Work** - Repair and maintenance operations, where ACM, including thermal system and surfacing material, is likely to be disturbed.

**Class IV Asbestos Work** - Maintenance and custodial activities during which employees contact ACM and PACM and activities to clean up waste and debris containing ACM and PACM.

**Clean Area:** The first stage of the decontamination enclosure system in which workers prepare to enter the work area.

**Competent Person** - In addition to the definition in 29 CFR 1926.32(f), one who is capable of identifying existing asbestos hazards in the work place and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 CFR 1926.32(f): in addition for Class I and Class II work who is specially trained in a training course which meet the criteria of 40 CFR 763 (Appendix C to Subpart E - Asbestos Model Accreditation Plan).

**Contaminated Items:** Any objects that have been exposed to airborne asbestos fibers without being sealed off or isolated.

**Contract Specifications:** A set of guideline that a contractor must follow when conducting an asbestos abatement job.

**Critical Barrier** - A minimum of two layers of six (6) mil polyethylene sheeting taped securely over windows, doorways, diffusers, grilles and any other openings between the asbestos abatement work area and uncontaminated areas outside of the work area, including the outside of the building.

**Curtained Doorway:** A device to allow ingress or egress from one room to another while permitting minimal air movement between the rooms, typically constructed by placing two overlapping sheets of plastic over an existing or temporarily framed doorway, securing each along the top of the doorway, securing the vertical edge of one sheet along one vertical side of the doorway and securing the vertical edge of the other sheet along the opposite side of the doorway.

**Damaged Friable Miscellaneous ACM:** Friable miscellaneous ACM which has deteriorated or sustained physical injury such that the internal structure (cohesion) of the material is inadequate or, if applicable, which has delaminated such that its bond to the substrate (adhesion) is inadequate or which for any other reason lacks fiber cohesion or adhesion qualities. Such damage or deterioration may be illustrated by the separation of ACM into layers; separation of ACM from the substrate; flaking, blistering, or crumbling of the ACM surface; water damage; significant or repeated water stains, scrapes, gouges, mars or other signs of physical injury on the ACM. Asbestos debris originating from the ACM in question may also indicate damage.

**Damaged Friable Surfacing ACM:** Friable surfacing ACM which has deteriorated or sustained physical injury such that the internal structure (cohesion) of the material is inadequate or which has delaminated such that its bond to the substrate (adhesion) is inadequate, or which, for any other reason, lacks fiber cohesion or adhesion qualities. Such damage or deterioration may be illustrated by the separation of ACM into layers; separation of ACM from the substrate; flaking, blistering, or crumbling of the ACM surface; water damage; significant or repeat water stains, scrapes, gouges, mars or other signs of physical injury on the ACM. Asbestos debris originating from the ACM in question may also indicate damage.

**Damage or Significantly Damaged Thermal System Insulation ACM:** Thermal system insulation ACM on pipes, boilers, tanks, ducts, and other thermal system insulation equipment where the insulation has lost its structural integrity, or its covering, in whole or in part, is crushed, water stained, gouged, punctured, missing, or not intact such that it is not able to contain fibers. Damage may be further illustrated by occasional punctures, gouges or other signs of physical injury to ACM; occasional water damage on the protective coverings/jackets; or exposed ACM ends or joints. Asbestos debris originating from the ACM in question may also indicate damage.

**Decontamination Unit:** An enclosed area used during asbestos abatement. The unit consists of a series of connected rooms with polyethylene curtained doorways for the purpose of preventing contamination of areas adjacent to the work area. The unit consists of an equipment room, shower area, and clean room, which is used for the decontamination of workers, materials, and equipment contaminated with asbestos.

**Delaminate:** To separate into layers. As used here, to separate from the substrate.

**Demolition:** The wrecking or taking out of any load-supporting structural member and any related razing, removing, or stripping of asbestos products.

**DEP -** The Connecticut Department of Environmental Protection, 79 Elm Street, Hartford, CT 06106.

**DPH -** The Connecticut Department of Public Health, 410 Capitol Avenue, Hartford, CT 06134.

Differential Pressure - A difference in the static air pressure between the Work Area and occupied areas, and is developed by the use of HEPA filtered exhaust fans. This differential is generally in the range of 0.02 to 0.04 inches of water column.

Duct Tape: Heavy gauge tape capable of sealing joints or adjacent sheets of polyethylene.

Electron Microscopy: A method of asbestos sample analysis which utilizes an electron beam to differentiate between fibers.

Employee Notification: Informing employees or building occupants if asbestos is present in the building, also informing them of the hazards associated with asbestos exposure, what is being done to eliminate the problem, etc.

Encapsulant (sealant): A substance applied to asbestos-containing material which controls the release of airborne asbestos-fibers.

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

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

Engineering Controls - Controls to include, but not be limited to, pressure differential equipment, decontamination enclosures, critical barriers and related procedures.

Equipment Decontamination Enclosure System - The portion of a Decontamination Enclosure System designed for controlled transfer of materials and equipment into or out of the Work Area, typically consisting of a Washroom and a Holding Area.

EPA: Environmental Protection Agency

EPA Regulations: Regulatory standards which cover emissions into the outside environment from a workplace and disposal of hazardous wastes from job sites.

Equipment Room (Change Room): A contaminated room located within the decontamination area that is supplied with impermeable bags or containers for the disposal of contaminated protective clothing and equipment.

f/CC: Fibers per cubic centimeter of air.

Fiber: A particulate form of asbestos, 5 micrometers or longer, with a length-to-diameter ratio of at least 3 to 1.

**Fiber Release Episode:** Any uncontrolled or unintentional disturbance of ACM resulting in visible emission.

**Fibrous:** Composed almost entirely of fibers.

**Fireproofing:** Spray-on or trowel-applied fire resistant materials.

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

**Friable Asbestos:** Any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

**Glove-Bag Technique** - A method with limited applications for removing small amounts of friable asbestos-containing material from HVAC ducts, short piping runs, valves, joints, elbows, and other non-planar surfaces in a non-contaminated work area. Information on glove-bag installation, equipment and supplies, and work practices is contained in 29 CFR 1926.1101. The glove-bag assembly is a manufactured or fabricated device consisting of a glove-bag (typically constructed of six (6) mil polyethylene or polyvinyl chloride plastic), two inward projecting long sleeves, an internal tool pouch, and an attached, labeled receptacle for asbestos waste. The glove-bag is constructed and installed in such a manner that it surrounds the object or material to be removed and contains all asbestos fibers released during the process.

**HEPA:** High Efficiency Particulate Air (Air Filter). A filter capable of trapping and retaining at least 99.97 percent of all monodispersed particles of 0.3 micrometers in diameter or larger.

**HEPA Filter Equipment** - High-efficiency particulate air (HEPA) filtered vacuum and/or exhaust ventilation equipment with a filter system capable of trapping and retaining asbestos fibers. Filters shall be of 99.97 percent efficiency for retaining fibers of 0.3 microns in diameter or larger.

**HEPA Filtered Vacuum:** A high efficiency particulate air (HEPA) filtered vacuum capable of trapping and retaining 99.97% of all particulates larger than 0.3 microns.

**Homogenous:** Evenly mixed and similar in appearance and texture throughout.

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

**HVAC System:** Heating, Ventilation, and Air Conditioning system.

Local Exhaust Ventilation: The mechanical removal of air contaminants from a point of operation.

Lock-down - The procedure of spraying polyethylene sheeting and building materials with an encapsulant type sealant to seal in non-visible asbestos-containing residue.

Major Fiber Release Episode - Any uncontrolled or unintentional disturbance of ACBM, resulting in a visible emission, which involves the falling or dislodging of more than 3 square or 3 linear feet of friable ACBM.

Minor Fiber Release Episode - Any uncontrolled or unintentional disturbance of ACBM, resulting in a visible emission, which involves the falling or dislodging of 3 square or linear feet or less of friable ACBM.

Medical Examinations: An evaluation of a person's health status conducted by a medical doctor.

Micron: One millionth of a meter.

Mil: Prefix meaning one-thousandth.

Negative Initial Exposure Assessment - A demonstration by the employer which complies with the criteria in 29 CFR 1926.1101(f)(2)(iii) that employee exposure during an operation is expected to be consistently below the PEL.

Negative Pressure: An atmosphere created in a work area enclosure such that airborne fibers will tend to be drawn through the filtration system rather than leak out into the surrounding areas. The air pressure inside the work area is less than that outside the work area.

Negative Pressure Enclosure (NPE) - An airtight enclosure for abatement where differential pressure is produced using exhaust ventilation equipment with HEPA filters.

NESHAP: National Emission Standards for Hazardous Air Pollutants - EPA Regulation 40 CFR subpart M, part 61.

NIOSH: The National Institute for Occupational Safety and Health which was established by the Occupational Safety and Health Act of 1970.

NIOSH/MSHA: The official approving agencies for respiratory protective equipment who test and certify respirators.

Nonfriable: Material which when dry may not be crumbled, pulverized, or reduced to powder by hand pressure.

**Nonfriable Asbestos-Containing Material:** Any material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

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

**OSHA:** The Occupational Safety and Health Administration which was created by the Occupational Safety and Health Act of 1970; serves as the enforcement agency for safety and health in the workplace environment.

**PCM:** Phase Contrast Microscopy.

**PEL:** Permissible Exposure Limit as stated by OSHA.

**Penetrating Encapsulant:** Liquid material applied to asbestos-containing material to control airborne fiber release by penetrating into the material and binding its components together.

**Permissible Exposure Limits (PELS) - (1) Time-weighted Average Limit (TWA).** The employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 0.1 fiber per cubic centimeter (f/cc) of air as an eight (8) hour time-weighted average (TWA). **(2) Excursion Limit.** The employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 fiber per cubic centimeter of air (1 f/cc) as averaged over a sampling period of thirty (30) minutes.

**Personal Protective Equipment (PPE):** Any material or device worn to protect a worker from exposure to, or contact with, any harmful material or force.

**Personal Sample:** An air sample taken with the sampling pump directly attached to the worker with the collecting filter placed in the worker's breathing zone.

**PF:** Protection factor is provided by the respirator which is determined by dividing the airborne fiber concentration outside of the mask by the concentration inside the mask.

**Phase Contrast Microscopy (PCM):** An optical microscopic technique used for the counting of fibers in air samples, but which does not distinguish fiber types.

**Pipe Lagging:** The insulation or wrapping around a pipe.

**Polarized Light Microscopy (PLM):** An optical microscopic technique used to identify asbestos and distinguish between different types of asbestos fibers by their shape and unique optical properties.



**Polyethylene:** Plastic sheeting which is often used to seal off an area in which asbestos removal is taking place for the purpose of preventing contamination of other areas.

**Pre-Clean -** The process of cleaning an area before asbestos abatement activities begin to ensure all dust and debris in the area considered to be asbestos-containing are properly contained and disposed of. This increases the likelihood the area will pass aggressive air sampling clearance requirements after asbestos-containing materials have been removed.

**Project Monitor -** The certified and licensed individual contracted or employed by the building owner or contractor to supervise and/or conduct air monitoring and analysis schemes. This individual is responsible for recognition of technical deficiencies in procedures during both planning and on-site phases of an abatement project. Requirements for Project Monitor are defined in the Connecticut Department of Public Health Regulations (Sections 20-440-1 through 20-440-9 inclusive). In addition to these requirements, this person shall be listed in the American Industrial Hygiene Association's Asbestos Analysts Registry.

**Protective Clothing:** Protective, lightweight garments (such as Tyvek suits) worn by workers performing asbestos abatement to keep gross contamination off the body.

**Pulmonary Function Tests:** A part of the medical examination required to determine the health status of a person's lungs.

**Qualitative Fit Test:** A method of testing a respirator's face-to-facepiece seal by covering the inhalation or exhalation valves and either breathing in or out to determine the presence of any leaks.

**Regulated Area -** Area established by the employer to demarcate areas where Class I, II and III work is conducted, and any adjoining area where debris and waste from such asbestos work accumulate; a work area within which airborne concentrations of asbestos exceed or there is a reasonable possibility they may exceed the PEL.

**Regulated Asbestos-Containing Material (RACM):** Means (a) Friable asbestos material, (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.

**Removal:** The taking out or stripping asbestos or materials containing asbestos.

**Resilient Floor Covering:** Asbestos-containing floor tile, including asphalt and vinyl floor tile, and sheet vinyl floor covering containing more than 1 percent asbestos as determined using polarized light microscopy.

Respirable: Breathable.

Respiratory Protection Program: A written program established by an employer which provides for the safe use of respirators by employees.

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

Routine Maintenance Area: An area, such as a boiler room or mechanical room, in which maintenance employees or contract workers regularly conduct maintenance activities.

Serpentine: One of the two major groups of minerals from which the asbestiform minerals are derived, distinguished by their tubular structure and chemical composition.

Shower Room: A room between the clean room and the equipment room in a worker decontamination system in which workers take showers when leaving the work area.

Significantly Damaged Friable Miscellaneous ACM: Damaged friable miscellaneous ACM where the damage is extensive and severe.

Significantly Damaged Friable Surfacing ACM: Damaged friable surfacing ACM in a functional space where the damage is extensive and severe.

Substrate: The materials or existing surface located under or behind the asbestos-containing material.

Surfacing ACM: Surfacing material that is ACM.

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

Surfactant: a chemical wetting agent added to water to improve its penetration abilities into asbestos-containing materials.

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

Thermal System Insulation ACM: Means thermal system insulation that is ACM.

Transmission Electron Microscopy (TEM): A method of microscopic analysis which utilizes an electron beam that is focused onto a thin sample. As the beam penetrates (transmits) through the sample, the difference in densities produces an image on a fluorescent screen from which samples can be identified and counted.

TWA: Time Weighted Average, as in air sampling.

USEPA: United States Environmental Protection Agency

Visible Emissions: Any emissions, which are visually detectable without the aid of instruments, coming from RACM or asbestos-containing waste material, or from any asbestos milling, manufacturing, or fabricating operation. This does not include condensed, uncombined water vapor.

Washroom: A room between the work area and the clean room in the equipment decontamination enclosure system where workers shower.

Waste Shipment Record: The shipping document, required to be originated and signed by the waste generator, used to track and substantiate the disposition of asbestos-containing waste material.

Water Damage: Deterioration or delamination of ceiling or wall materials due to leaks from plumbing or cracks in the roof.

Wet Cleaning: The process of eliminating asbestos contamination from surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with water.

Wetting Agents: Materials that are added to water which is used for wetting the asbestos-containing material in order for the water to penetrate more effectively.

**APPENDIX B**

**Example Recordkeeping Form For Periodic Surveillance**

REINSPECTION OF ASBESTOS-CONTAINING MATERIALS  
GATEWAY COMMUNITY TECHNICAL COLLEGE

LOCATION (Building/Room Number): \_\_\_\_\_

TYPE OF MATERIAL: \_\_\_\_\_

LOCATION WITHIN ROOM: \_\_\_\_\_

DATE OF REINSPECTION: \_\_\_\_\_

DATE OF LAST INSPECTION: \_\_\_\_\_

ASSESSMENT:

1. EVIDENCE OF PHYSICAL DAMAGE: \_\_\_\_\_  
\_\_\_\_\_
2. EVIDENCE OF WATER DAMAGE: \_\_\_\_\_  
\_\_\_\_\_
3. DEGREE OF ACCESSIBILITY OF MATERIAL: \_\_\_\_\_  
\_\_\_\_\_
4. DEGREE OF ACTIVITY NEAR THE MATERIAL: \_\_\_\_\_  
\_\_\_\_\_
5. IS MATERIAL LOCATED IN AN AIR PLENUM OR AIR SHAFT?: \_\_\_\_\_  
\_\_\_\_\_
6. OTHER OBSERVATIONS: \_\_\_\_\_  
\_\_\_\_\_
7. **RECOMMENDED ACTIONS/LEVEL OF PRIORITY:** \_\_\_\_\_  
\_\_\_\_\_

EXAMPLES/GUIDANCE

- \* FOR ITEM #3, PIPE FITTINGS ABOVE A SUSPENDED CEILING AND VINYL FLOOR TILE BENEATH CARPET ARE EXAMPLES OF MATERIALS WHICH WOULD TYPICALLY HAVE A LOW LEVEL OF ACCESSIBILITY. EXPOSED VINYL FLOOR TILE WOULD TYPICALLY HAVE A HIGH LEVEL OF ACCESSIBILITY.
- \*\* FOR ITEM #4, A STORAGE CLOSET WOULD TYPICALLY HAVE A LOW LEVEL OF ACTIVITY, WHILE A CORRIDOR NEAR OFFICE AREAS WOULD HAVE A HIGH LEVEL OF ACTIVITY.

INSPECTOR NAME: \_\_\_\_\_ SIGNATURE: \_\_\_\_\_

**APPENDIX C**

**Completed Periodic Surveillance Forms**

APPENDIX D

Asbestos Job Request/Work Authorization Form

JOB REQUEST FORM FOR MAINTENANCE WORK  
GATEWAY COMMUNITY TECHNICAL COLLEGE

REQUESTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

PLANNED WORK START DATE: \_\_\_\_\_ FINISH DATE: \_\_\_\_\_

LOCATION OF WORK (ROOM NUMBERS): \_\_\_\_\_

DESCRIPTION OF WORK (INCLUDE SPECIFIC AREAS/MATERIALS AFFECTED): \_\_\_\_\_

---

---

---

---

---

DESCRIPTION OF ANY ASBESTOS-CONTAINING MATERIALS WHICH MAY BE AFFECTED, IF KNOWN. PROVIDE LOCATION AND TYPE: \_\_\_\_\_

---

---

---

---

REVIEWED BY ASBESTOS PROGRAM MANAGER: \_\_\_\_\_  
(SIGNATURE / DATE)

DECISION BY ASBESTOS PROGRAM MANAGER (CIRCLE ONE):

**APPROVED** (DESCRIBE ANY CONDITIONS): \_\_\_\_\_

---

---

**DENIED:** ASBESTOS IS PRESENT AND MAY BE DISTURBED. ABATEMENT BY AN OUTSIDE ASBESTOS CONTRACTOR MUST BE COMPLETED PRIOR TO INITIATION OF THE IN-HOUSE MAINTENANCE WORK.

**NOTE:**

THIS FORM IS TO BE SUBMITTED FOR ALL MAINTENANCE WORK. THE FORM MUST BE REVIEWED AND APPROVED BY THE ASBESTOS PROGRAM MANAGER PRIOR TO THE START OF ANY WORK. IF APPROVED, THE PROGRAM MANAGER SHALL ATTACH AN AUTHORIZATION FORM TO THIS REQUEST AND RETURN IT TO THE REQUESTOR.



**APPENDIX E**

**Completed Job Request/Work Authorization Forms**

APPENDIX F  
Training Schedule

GATEWAY COMMUNITY TECHNICAL COLLEGE ASBESTOS TRAINING SCHEDULE				
NAME	PROGRAM RESPONSIBILITY*	HOURS OF INITIAL TRAINING**	DATE OF INITIAL TRAINING	DATES OF REFRESHER TRAINING
	PROGRAM MGR.			
	MAINTENANCE STAFF			
	MAINTENANCE STAFF			
	MAINTENANCE STAFF			

\* List the person's responsibilities with respect to the asbestos program, i.e., Program Manager, O&M Worker, Maintenance Staff.  
 \*\* It is recommended that the Program Manager have at least 16 hours of training. Maintenance staff who do not handle asbestos should have at least 2 hours of awareness training.

APPENDIX G

Personnel Training Records

APPENDIX H

DPW Asbestos Abatement Request Form 33

**HAZARDOUS MATERIAL INSPECTION/ABATEMENT REQUEST**

TO: Jerry Glasman/ John Wytas  
Statewide Services - Room 280  
DPW-Asbestos/Lead Management  
165 Capitol Avenue, Hadd, CT 06106

Tel 860 713-5709  
Tel.:860-713-5702  
FAX: 860-713-7250

FROM: \_\_\_\_\_ TEL.: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
(Mailing Address)

DATE: \_\_\_\_\_, 2000

BUILDING NAME: \_\_\_\_\_ DPW # \_\_\_\_\_  
ADDRESS: \_\_\_\_\_

PROJECT TYPE: \_\_\_\_\_ (Asbestos/Lead/Outdoor/Indoor/Air Quality)

Capital (>\$50K) Term (<\$50K and/or time issue) Not known yet  
(Circle One)

REQUESTED COMPLETION DATE OF INSPECTION: \_\_\_\_/\_\_\_\_/\_\_\_\_

TYPE OF INSPECTION/ABATEMENT REQUEST:  
(Circle One)

ASBESTOS (circle): Roof, Floor, Tile, Piping, Ceiling Tile, Transite, or Other: \_\_\_\_\_  
If asbestos in roof, please complete the following:  
Bond or Warranty: \_\_\_\_\_  
Access to roof from: \_\_\_\_\_

LEAD (circle): Paint, Piping, Soil, Water, Roofing Material, or Other: \_\_\_\_\_  
(PLEASE INDICATE FUNDING SOURCE \_\_\_\_\_)

INDOOR AIR QUALITY (Describe Briefly): \_\_\_\_\_  
(PLEASE INDICATE FUNDING SOURCE \_\_\_\_\_)

SCOPE OF ASB. ABATEMENT (if applicable) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

BUILDING AREA DESCRIPTION:  
Specific Area in Question: \_\_\_\_\_

ON SITE/CONTACT PERSON: \_\_\_\_\_ TEL. # \_\_\_\_\_

AGENCY REPRESENTATIVE: \_\_\_\_\_ TEL. # \_\_\_\_\_

A/E CONSULTANT: \_\_\_\_\_ TEL. # \_\_\_\_\_

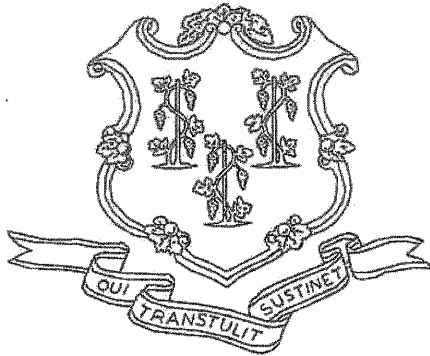
DESIGNREV (33)  
HAZARDOUS MATERIAL INSPECTION REQUEST

5/23/00

**APPENDIX I**

**Lead and Asbestos Survey Reports**

LEAD PAINT INSPECTION  
GATEWAY COMMUNITY TECHNICAL COLLEGE  
NORTH HAVEN CAMPUS  
88 BASSETT ROAD  
NORTH HAVEN, CONNECTICUT  
DPW Building No. 46088



PREPARED FOR:

Mr. Gerald S. Glassman  
Chief of Project Management  
Department of Public Works  
165 Capitol Avenue, Room 280  
Hartford, CT 06106

PROJECT NUMBER: BI-CTC-392-F (ASB)

REPORT DATE: May 2002



## TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE NUMBER</u>
1.0 Introduction .....	1
2.0 Facility Description .....	1
3.0 Summary of Lead Inspection Findings .....	1

## APPENDICES

APPENDIX A - Lead Inspector's Survey Reports



**DELTA Environmental Services,®Inc.**

## **1.0 INTRODUCTION**

This report summarizes the results of a lead-based paint (LBP) inspection for the North Haven Campus of Gateway Community Technical College (DPW Building Number 46088) located at 88 Bassett Road in North Haven, Connecticut. The project consisted of a screening inspection for lead-based paint using an X-Ray Fluorescence (XRF) analyzer.

## **2.0 FACILITY DESCRIPTION**

Gateway's North Haven campus is located at 88 Bassett Road in North Haven and consists of a single three-story building constructed circa 1968. The building was originally built as a junior high school and was converted to house the college. The building has 162,000± square feet of gross floor area.

The building is of concrete and steel construction and consists of classrooms, offices, an auditorium, library and cafeteria. The interior finishes in the building generally consist of vinyl floor tile or carpet over concrete floors, lay-in suspended tile ceilings, and concrete block/sheetrock walls.

Room numbers referred to in this report correspond to the floor plans included in Appendix A.

## **3.0 SUMMARY OF LEAD INSPECTION FINDINGS**

An X-Ray Fluorescence (XRF) screening inspection of the facility was conducted by Peter Shannon, a licensed lead inspector from Leadsafe, Inc. (a subcontractor to DELTA) on February 5, 2002. The purpose of the inspection was to determine whether toxic levels of lead are present in painted surfaces in the buildings as defined by State and Federal regulations.

Areas tested included door, window and wall surfaces throughout the buildings. The data was evaluated in the context of the regulatory standard of 1.0 milligrams per square centimeter ( $\text{mg}/\text{cm}^2$ ) of surface used to define lead-based paint (LBP).

The only surfaces which were found to exceed the standard were painted metal lockers in the corridors on the first and second floors, painted metal stair risers in Stairwell D near the auditorium, and a painted metal door buck in the first floor corridor. The concentrations of lead detected in these areas ranged from 1.2 to 4.5  $\text{mg}/\text{cm}^2$ .



The paint at these locations is in good condition, and is unlikely to present a hazard unless it is actively disturbed through scraping, sanding, demolition or other means.

Generally, lead abatement is only required in buildings where children under six years of age reside or where deteriorated or damaged LBP is present, though all renovation or maintenance activities involving disturbance of LBP in the building must be performed in compliance with OSHA lead regulation 29 CFR 1926.62.

A copy of the detailed report prepared by Leadsafe, Inc. is included in Appendix A.



## **APPENDIX A**

### **Lead Inspector's Survey Report**



**DELTA Environmental Services, Inc.**

# **LEAD PAINT INSPECTION REPORT**

**LEADSAFE INC. LICENSE # CC000647**

**FOR STRUCTURE (S) LOCATED AT:**

**Gateway Community Technical College  
North Haven Campus  
88 Bassett Road  
North Haven, CT.**

**February 8, 2002**

Mr. Jim McCarthy  
Delta Environmental, Inc.  
P.O. Box 564  
81 Schoolground Road  
Branford, CT. 06405

2-11-02  
Leadsafe ID#00335483

Dear Mr. McCarthy,

Leadsafe Environmental has conducted an on-site inspection for the detection of lead based paint at the Gateway Community Technical College at 88 Bassett Road, North Haven, CT. on 2-5-02. The rooms/spaces were tested using the HUD Chapter 7 Guidelines for Lead Base Paint Inspection, 1997 Revision. This methodology requires testing of representative components in each room/space, for example walls, ceilings, windows, doors, baseboards etc. The testing was performed by a licensed lead inspector, Peter Shannon ( Lic. # 001443) with a MAP 4 spectrum analyzer instrument.

**Summary of Findings**

There was lead paint identified at this site above the action level of 1.0 milligrams per square centimeter on hallway lockers (red, orange & yellow), Stairway risers & 1<sup>st</sup> floor hallway door buck.

The measurements taken at this site are on the spreadsheet pages. (Please read the page titled "How to Read The Test Report Data Sheets" to understand these pages.) The Map 4 tests for lead concentrations at two levels, the K-shell and the L-shell. The K-shell represents the total amount of lead in all the paint layers, while the L-shell represents the amount of lead which is in the paint closest to the surface. The test results are based on an "action level" is determined by the HUD guidelines.

The shaded Areas of the report indicate where the lead concentration is confirmed above the action level (taking into account the precision of the equipment). These locations are shown as POS in the last column. An inconclusive (INCL) result indicates the concentration of lead is in the vicinity of the action level within the boundaries of the precision of the Map 4. Inconclusive measurements can be qualified by taking paint chip samples and analyzing them at a laboratory. Due to additional expense, paint chip samples are only taken when authorized by the client.

This inspection report is for the exclusive private use of our client. The report provided to the client is confidential and is not to be copied or disseminated to any party other than the property owner, buyer, insurance carrier or tenant without the express written consent of the inspector. Use of all disclosures contained in this report is specifically restricted to the transaction for which the inspection was performed. Use of or reliance upon the report by other parties, or for other transactions is strictly prohibited. None of these test results or reports developed through the inspectors performance of the work are intended or represented to be suitable for reuse by the client or others as presenting an accurate description of the property or its condition beyond that existing on the date of the performance of the inspection. Use of said test results or reports or other materials by client without written permission or adaptation by the inspector for the specific purpose intended shall be at the user's sole risk, without liability on the inspector's part, and the client agrees to indemnify and hold the inspector harmless from all claims, damages and expenses, including attorney's fees, arising out of such unauthorized use.

All renovations which interrupt lead based paint must be done in compliance with applicable Federal, State and local laws and regulations. We recommend the use of a professional, licensed abatement contractor for the interruption or removal of hazardous levels of lead based paint and other lead contaminated materials. Keep in mind that "shop vacuums" and ordinary vacuums do not have adequate filtration systems for collection and containment of hazardous materials and may aggravate lead dust conditions. A high efficiency particulate arresting (HEPA) vacuum and special detergents are needed to remove lead contaminated dust and debris.

Leadsafe can provide consulting services, including abatement and management plans, to help you with any lead condition which may have been identified. Please call our office for further information or any questions you may have regarding this report. Thank you for using Leadsafe.

Sincerely,



Peter Shannon

### Report Disclaimer

THE INFORMATION PROVIDED IN THIS REPORT IS LIMITED BY THE SCOPE OF THE INSPECTION REQUESTED BY THE CLIENT.

NOT ALL INSPECTIONS YIELD INFORMATION REGARDING THE PRESENCE OF LEAD AND THE EXISTENCE OF LEAD HAZARDS IN ALL MEDIA. YOU ARE ADVISED TO CLARIFY THE SCOPE OF THE INSPECTION PROVIDED WITH THE INSPECTOR.

It is generally acknowledged that the condition of the lead based paint ("LBP") in or on a residential structure will determine the extent of the hazard arising out of such LBP. Accordingly, any change in the condition of the LBP in the property in question will alter the validity of the test results provided herewith. The accuracy of any lead hazard evaluation performed is, therefore, limited to the condition of the property at the time the investigation reported herewith was conducted. The inspector assumes no responsibility for retesting or reinvestigating the property to determine changed conditions. Any and all changes in the premises or it's condition may result in the creation of lead based paint hazards not in existence at the time of the inspection.

Client is advised that results which are reported as negative or inconclusive are not indicative of the total absence of lead in surface coating materials. Such results indicate that lead is not present in concentration levels defined by federal, state or local regulations as lead based paint. Client is notified that care should be taken in the event of an accidental or intentional disturbance of or the undertaking of activities which could affect surfaces coated with paints or coverings containing any amount of lead.

Not all surfaces were tested or were accessible for testing. The inspector makes no representation with respect to the presence of lead-based paint or the condition of any surfaces which were inaccessible. Surfaces which were not tested may, if tested, yield results which indicate the presence of lead in greater or lesser concentrations than those tested, due to variability in application, paint quality, usage or other factors. The Client is advised to take such factors into account when undertaking any activities which may have an impact upon such surfaces.

This report is intended only for the benefit of the Inspector and the Client and does not create any rights in any third parties.





WWW.LEADSAFEINC.COM

## How to Read the Test Report Data Sheets

The standard test report data sheets in the XRF Test Results section of the report have thirteen columns of information. An explanation of each column is detailed below:

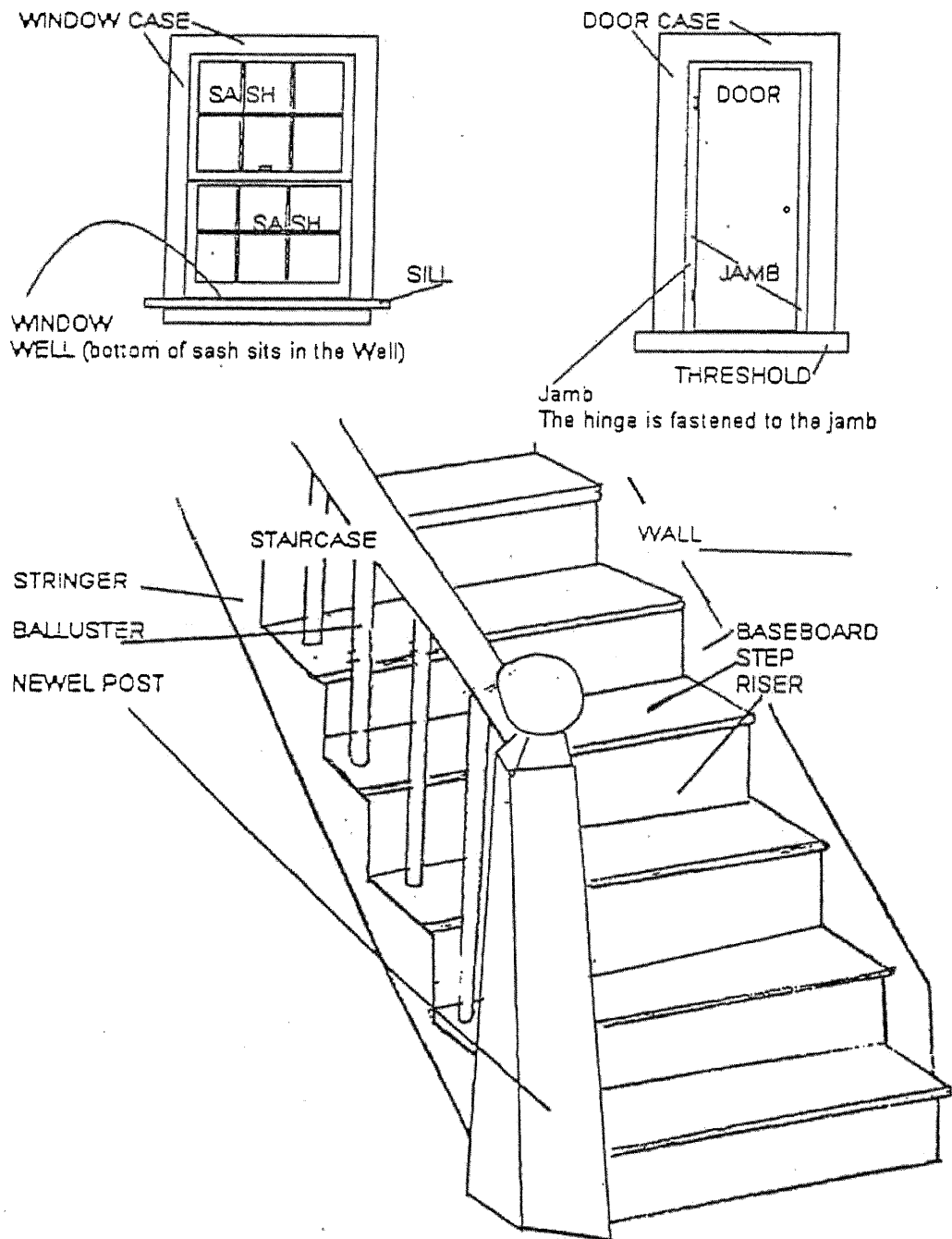
- 1) **#** All of the measurements taken at the site are numbered sequentially.
- 2) **Site** The number in this column is the identification number for this job site.
- 3) **Room-Tested** Each room/space tested is identified in this column. When more than one similar type of room/space is tested they are numbered sequentially as shown in column 4. Each room/space, as identified in the test data, is shown on the floor plan.
- 4) **#** The number in this column is coupled with column 3 (Room-Tested) to distinguish similar room types. For example: Bedroom 1, Bedroom 2, etc. as shown on the floor plan.
- 5) **Wall** The walls in each room/space are identified to show on which wall surface in the room each measurement was taken. The wall numbers are shown on the floor plan.
- 6) **Component** This column identifies the type of building component where the measurement was taken. The location of each measurement is randomly selected on that component.
- 7) **Condition** The paint condition at the time of testing is listed in this column.
- 8) **Substrate** The material that the building component is made of is called the substrate.
- 9) **K-Shell (mg/cm<sup>2</sup>)** The K-Shell is the measurement that evaluates the lead content in all layers of paint down to the substrate material. The measurement is in milligrams per square centimeter.
- 10) **L-Shell (mg/cm<sup>2</sup>)** The L-Shell is the measurement that evaluates the lead content in surface layers of paint.
- 11) **Map #** Identification number of the MAP instrument used for this test.
- 12) **Result** The result of the measurement is related to the action level (allowable lead level) and adjusted for the level of precision used for that measurement.

(Pos)	Positive result	>	Action Level + precision level
(Incl)	Inconclusive range	=	Action Level +/- precision level.
(Neg)	Negative result	<	Action Level - precision level

# LEADSAFE

ENVIRONMENTAL

WWW.LEADSAFEINC.COM

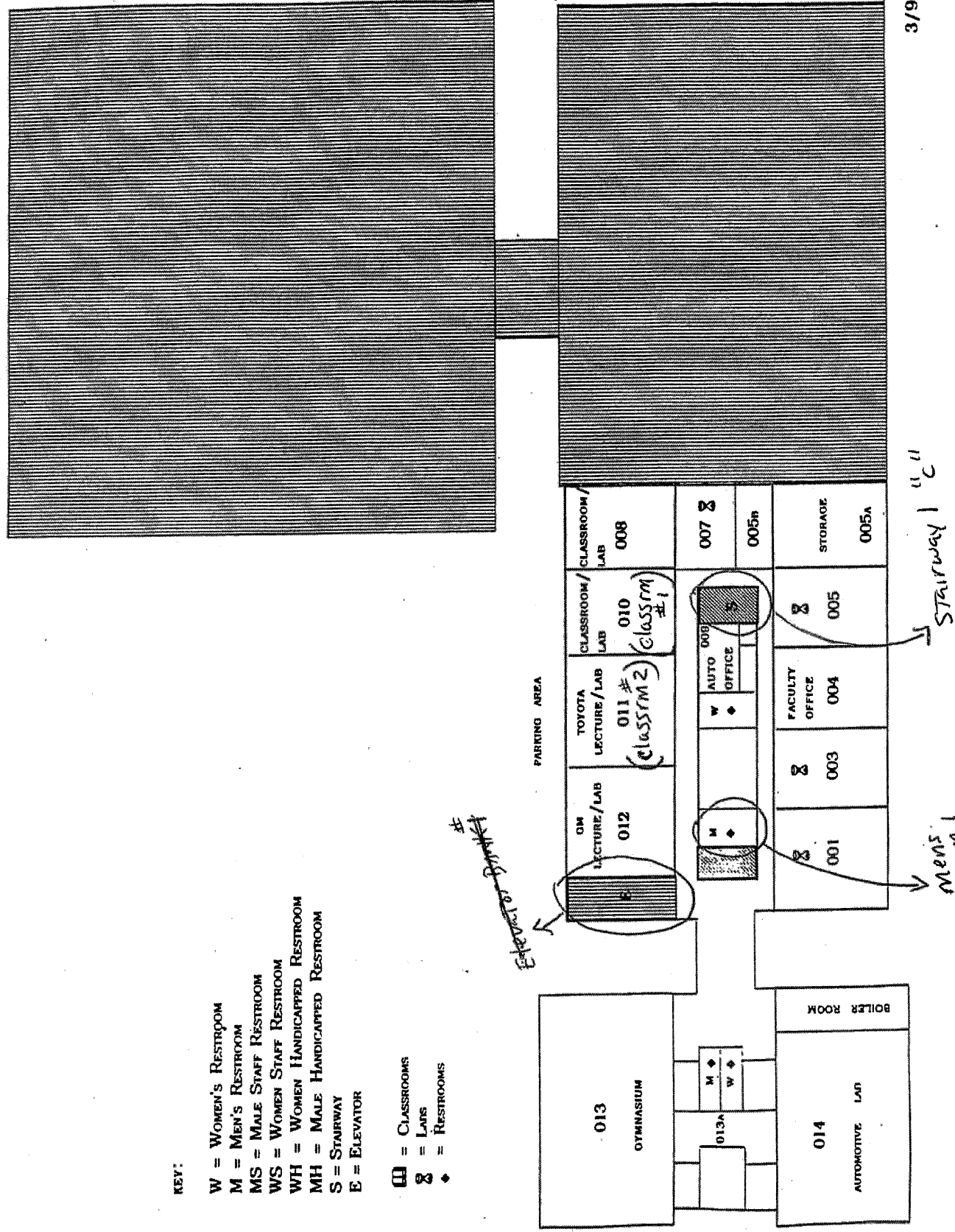


29 BANK STREET • STAMFORD, CONNECTICUT 06901 • 800-392-6468 TEL. • 203-921-4145 FAX  
OFFICES ALSO IN HARTFORD, CT AND ALBANY & MAMARONECK, NY

KEY:

W = WOMEN'S RESTROOM  
M = MEN'S RESTROOM  
MS = MALE STAFF RESTROOM  
WS = WOMEN STAFF RESTROOM  
WH = WOMEN HANDICAPPED RESTROOM  
MH = MALE HANDICAPPED RESTROOM  
S = STAIRWAY  
E = ELEVATOR

□ = CLASSROOMS  
⊗ = LABS  
♦ = RESTROOMS



FIRST FLOOR - 3rd

SITE 111

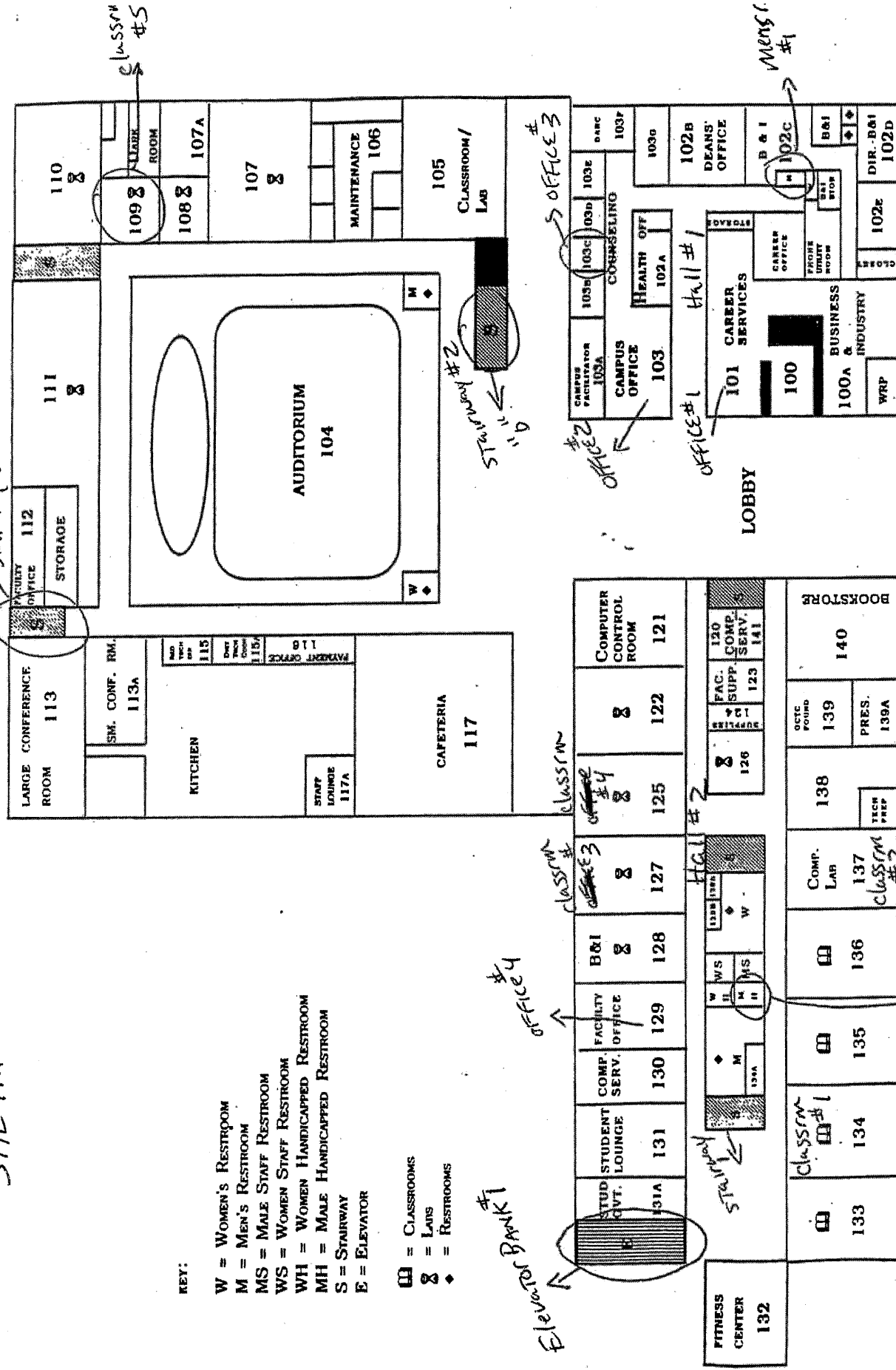
# NORTH HAVEN CAMPUS

88 BASSETT ROAD, NORTH HAVEN, CT 06473

## KEY:

- W = WOMEN'S RESTROOM
- M = MEN'S RESTROOM
- MS = MALE STAFF RESTROOM
- WS = WOMEN STAFF RESTROOM
- WH = WOMEN HANDICAPPED RESTROOM
- MH = MALE HANDICAPPED RESTROOM
- S = STAIRWAY
- E = ELEVATOR

- = CLASSROOMS
- ⊗ = LAUNDRY
- ◆ = RESTROOMS



MAIN ENTRANCE

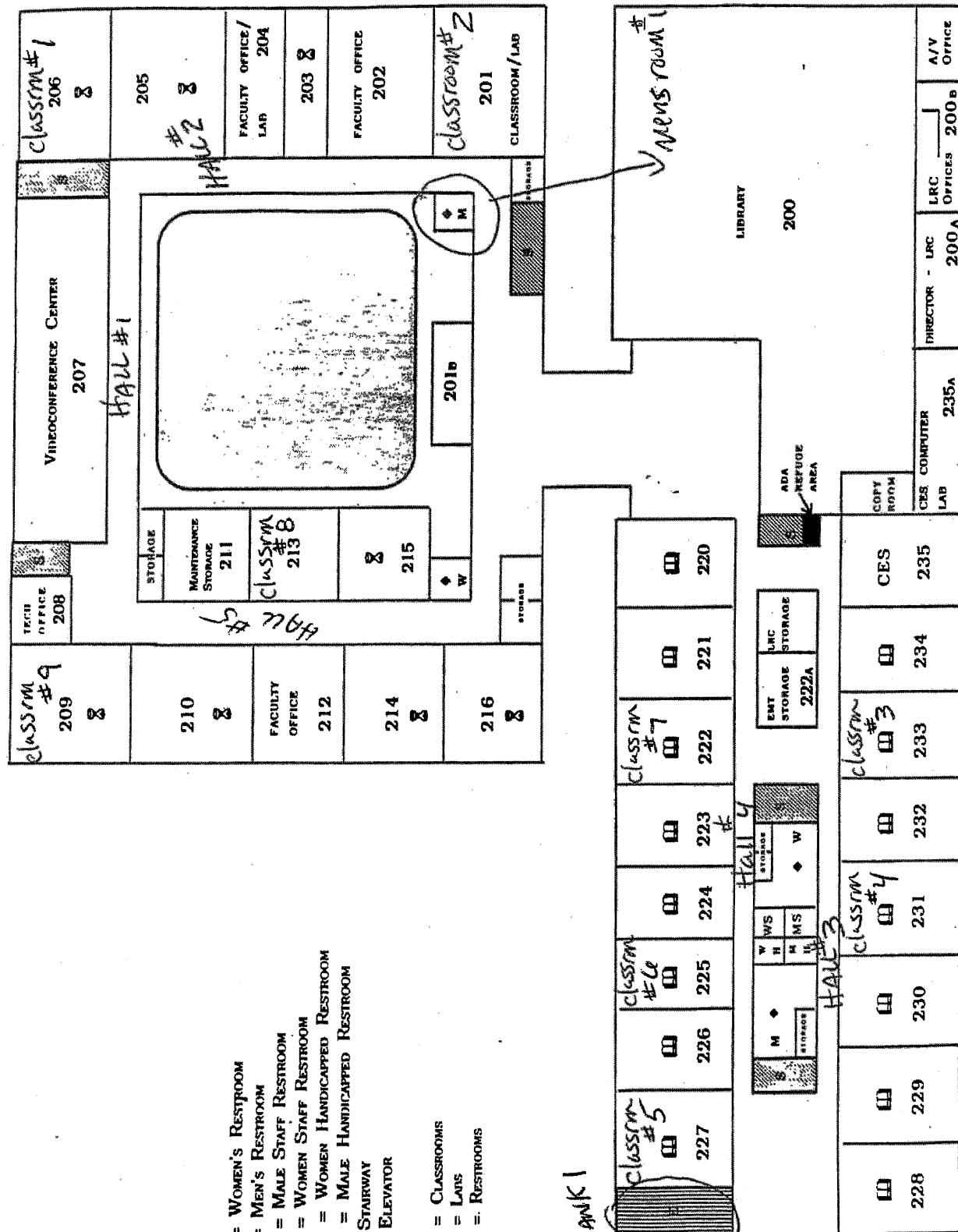
FRONT PARKING LOT

3/98

KEY:

W = WOMEN'S RESTROOM  
M = MEN'S RESTROOM  
MS = MALE STAFF RESTROOM  
WS = WOMEN STAFF RESTROOM  
WH = WOMEN HANDICAPPED RESTROOM  
MH = MALE HANDICAPPED RESTROOM  
S = STAIRWAY  
E = ELEVATOR

□ = CLASSROOMS  
⊗ = LANS  
◆ = RESTROOMS



# XRF and Lab Results

Customer: Leadsafe Environmental  
1-800-392-6468

Project Name: Delta Environmental  
2-5-02

Site Name: 83 Bassett Rd.- 1st Floor  
North Haven, CT.

Action Level 1.000 mg /cm2 Lab 1.000 mg /cm2

Total Assays Reported

163

#	Site	Room Tested	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
16636	1111	Calibration	*	*	*	*	*	0.000 X	0.000 X	0		
16637	1111	Calibration	*	*	*	*	*	1.005 K	1.090 L	386		Incl
16638	1111	Lobby	1	1	Door	Thin Metal	Intact	-1.135 K	-0.513 L	386		Neg
16639	1111	Lobby	1	2	Wall	Concrete	Intact	-1.679 K	0.070 L	386		Neg
16640	1111	Lobby	1	2	Radiator	Thin Metal	Intact	0.174 K	-0.001 L	386		Neg
16641	1111	Lobby	1	4	Column	Concrete	Intact	0.090 K	-0.791 L	386		Neg
16642	1111	Lobby	1	3	Wall	Concrete	Intact	-2.495 K	-0.394 L	386		Neg
16643	1111	Office	1	1	Wall	Concrete	Intact	-1.531 K	-0.647 L	386		Neg
16644	1111	Office	1	2	Wall	Wallboard	Intact	-1.186 K	0.360 L	386		Neg
16645	1111	Office	1	2	Door Buck	Thin Metal	Intact	0.100 K	0.301 L	386		Neg
16646	1111	Office	1	2	Door	Thin Metal	Intact	0.043 K	-0.041 L	386		Neg
16647	1111	Office	1	3	Wall	Concrete	Intact	-0.974 K	-0.338 L	386		Neg
16648	1111	Office	1	4	Wall	Concrete	Intact	-1.592 K	-0.336 L	386		Neg
16649	1111	Hallway	1	1	Wall	Concrete	Intact	-0.306 K	-0.466 L	386		Neg
16650	1111	Hallway	1	3	Wall	Concrete	Intact	-0.253 K	-0.249 L	386		Neg
16651	1111	Hallway	1	3	Door	Thin Metal	Intact	0.253 K	-0.070 L	386		Neg
16652	1111	Hallway	1	3	Door Buck	Thin Metal	Intact	0.746 K	0.557 L	386		Neg
16653	1111	Hallway	1	4	Wall	Concrete	Intact	-0.886 K	-0.848 L	386		Neg
16654	1111	Mens Room	1	1	Wall	Concrete	Intact	-0.037 K	-0.537 L	386		Neg
16655	1111	Mens Room	1	2	Wall	Concrete	Intact	0.138 K	-0.187 L	386		Neg
16656	1111	Mens Room	1	2	Door Buck	Thin Metal	Intact	-0.056 K	0.680 L	386		Neg

# XRF and Lab Results

Customer: Leadsafe Environmental  
1-800-392-6468

Project Name: Delta Environmental  
2-5-02

Site Name: 83 Bassett Rd. - 1st Floor  
North Haven, CT.

Action Level 1,000 mg /cm2 Lab 1,000 mg /cm2

Total Assays Reported 163

#	Site	Room Tested	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
16657	1111	Mens Room	1	2	Door	Thin Metal	Intact	0.312 K	0.189 L	386		Neg
16658	1111	Mens Room	1	3	Wall	Concrete	Intact	-0.019 K	-0.420 L	386		Neg
16659	1111	Mens Room	1	4	Wall	Concrete	Intact	0.293 K	-0.109 L	386		Neg
16660	1111	Office	2	2	Wall	Wallboard	Intact	-0.344 K	-0.346 L	386		Neg
16661	1111	Office	2	2	Door Buck	Thin Metal	Intact	0.383 K	0.507 L	386		Neg
16662	1111	Office	2	4	Wall	Concrete	Intact	-0.119 K	-0.161 L	386		Neg
16663	1111	Office	3	1	Wall	Concrete	Intact	-2.365 K	-0.826 L	386		Neg
16664	1111	Office	3	1	Door Buck	Thin Metal	Intact	0.616 K	0.470 L	386		Neg
16665	1111	Office	3	2	Wall	Concrete	Intact	0.123 K	-0.492 L	386		Neg
16666	1111	Office	3	3	Column	Concrete	Intact	-0.278 K	-0.160 L	386		Neg
16667	1111	Office	3	4	Wall	Concrete	Intact	-0.654 K	-0.095 L	386		Neg
16668	1111	Hallway	2	1	Wall	Concrete	Intact	-1.195 K	-0.838 L	386		Neg
16669	1111	Hallway	2	1	Door Buck	Thin Metal	Intact	-1.308 K	0.562 L	386		Neg
16670	1111	Hallway	2	3	Wall	Concrete	Intact	-0.089 K	-0.169 L	386		Neg
16671	1111	Hallway	2	1	Lockers	Thin Metal	Intact	3.517 K	2.159 L	386		Pos
16672	1111	Hallway	2	1	Lockers	Thin Metal	Intact	-0.629 K	-0.015 L	386		Neg
16673	1111	Hallway	2	1	Lockers	Thin Metal	Intact	0.247 K	0.405 L	386		Neg
16674	1111	Hallway	2	1	Lockers	Thin Metal	Intact	4.400 K	3.065 L	386		Pos
16675	1111	Hallway	2	1	Lockers	Thin Metal	Intact	1.470 K	1.261 L	386		Pos
16676	1111	Hallway	2	1	Lockers	Thin Metal	Intact	1.391 K	1.136 L	386		Pos
16677	1111	Hallway	2	3	Wall	Concrete	Intact	-0.071 K	-0.299 L	386		Neg

# XRF and Lab Results

Customer: Leadsafe Environmental  
1-800-392-6468

Project Name: Delta Environmental  
2-5-02

Site Name: 83 Bassett Rd.- 1st Floor  
North Haven, CT.

Action Level 1,000 mg /cm2 Lab 1,000 mg /cm2

Total Assays Reported

163

#	Site	Room Tested	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
16678	1111	Classroom	1	1	Wall	Wallboard	Intact	-0.209 K	-0.398 L	386		Neg
16679	1111	Classroom	1	2	Wall	Concrete	Intact	-0.514 K	-0.463 L	386		Neg
16680	1111	Classroom	1	3	Wall	Concrete	Intact	0.105 K	-0.649 L	386		Neg
16681	1111	Classroom	1	4	Wall	Concrete	Intact	0.303 K	-0.231 L	386		Neg
16682	1111	Classroom	1	3	Door Buck	Thin Metal	Poor	0.730 K	0.631 L	386		Neg
16683	1111	Classroom	2	1	Wall	Concrete	Intact	-0.111 K	-0.773 L	386		Neg
16684	1111	Classroom	2	2	Wall	Concrete	Intact	-0.046 K	-0.257 L	386		Neg
16685	1111	Classroom	2	1	Radiator	Thin Metal	Intact	-0.145 K	0.282 L	386		Neg
16686	1111	Classroom	2	3	Wall	Concrete	Intact	0.167 K	0.042 L	386		Neg
16687	1111	Classroom	2	3	Door Buck	Thin Metal	Intact	-0.451 K	0.592 L	386		Neg
16688	1111	Classroom	2	4	Wall	Concrete	Intact	-0.217 K	-0.017 L	386		Neg
16689	1111	Mens Room	2	1	Wall	Concrete	Intact	-0.242 K	-0.021 L	386		Neg
16690	1111	Mens Room	2	3	Wall	Wallboard	Intact	0.253 K	0.460 L	386		Neg
16691	1111	Mens Room	2	4	Wall	Concrete	Intact	-0.711 K	0.051 L	386		Neg
16692	1111	Mens Room	2	3	Toilet Stall	Thin Metal	Intact	-0.028 K	0.261 L	386		Neg
16693	1111	Mens Room	2	3	Toilet Stall	Thin Metal	Intact	0.198 K	0.480 L	386		Neg
16694	1111	Mens Room	2	1	Door Buck	Thin Metal	Intact	-0.065 K	0.349 L	386		Neg
16695	1111	Stairway	1	1	Wall	Concrete	Intact	0.118 K	-0.436 L	386		Neg
16696	1111	Stairway	1	2	Wall	Concrete	Intact	-0.253 K	-0.140 L	386		Neg
16697	1111	Stairway	1	2	Door Buck	Thin Metal	Intact	0.706 K	0.658 L	386		Neg
16698	1111	Stairway	1	2	Door Buck	Thin Metal	Intact	0.621 K	0.668 L	386		Neg



leadsafe, inc

# XRF and Lab Results

Customer: Leadsafe Environmental  
1-800-392-6468

Project Name: Delta Environmental  
2-5-02

Site Name: 83 Bassett Rd.- 1st Floor  
North Haven, CT.

Action Level 1.000 mg /cm2 Lab 1.000 mg /cm2

Total Assays Reported 163

#	Site	Room Tested	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
1669	1111	Stairway	1	2	Door	Thin Metal	Intact	0.109 K	0.390 L	386		Neg
1670	1111	Stairway	1	3	Wall	Concrete	Intact	0.188 K	-0.103 L	386		Neg
16701	1111	Stairway	1	3	Stair Riser	Thin Metal	Intact	0.564 K	0.525 L	386		Neg
16702	1111	Stairway	1	3	Stringer	Thin Metal	Intact	0.618 K	0.286 L	386		Neg
16703	1111	Stairway	1	4	Wall	Concrete	Intact	-1.178 K	0.851 L	386		Neg
16704	1111	Elevator Bank	1	3	Door	Thin Metal	Intact	0.225 K	0.217 L	386		Neg
16705	1111	Elevator Bank	1	3	Door Case	Thin Metal	Intact	0.600 K	0.628 L	386		Neg
16706	1111	Hallway	2	1	Wall	Concrete	Intact	-0.792 K	0.687 L	386		Neg
16707	1111	Hallway	2	2	Wall	Concrete	Intact	-1.237 K	-0.234 L	386		Neg
16708	1111	Hallway	2	3	Wall	Concrete	Intact	-0.160 K	-0.438 L	386		Neg
16709	1111	Hallway	2	3	Door Buck	Thin Metal	Intact	1.004 K	0.705 L	386		Incl
16710	1111	Hallway	2	3	Door Buck	Thin Metal	Intact	0.697 K	0.596 L	386		Neg
16711	1111	Hallway	2	3	Wall	Wallboard	Intact	0.224 K	-0.188 L	386		Neg
16712	1111	Hallway	2	3	Lockers	Thin Metal	Intact	0.400 K	3.102 L	386		Pos
16713	1111	Hallway	2	3	Lockers	Thin Metal	Intact	1.595 K	1.545 L	386		Pos
16714	1111	Hallway	2	3	Lockers	Thin Metal	Intact	0.381 K	0.348 L	386		Neg
16715	1111	Hallway	2	3	Lockers	Thin Metal	Intact	0.187 K	0.387 L	386		Neg
16716	1111	Hallway	2	1	Wall	Concrete	Intact	-0.204 K	0.004 L	386		Neg
16717	1111	Office	4	1	Wall	Concrete	Intact	0.324 K	-0.326 L	386		Neg
16718	1111	Office	4	1	Door Buck	Thin Metal	Intact	0.983 K	0.824 L	386		Incl
16719	1111	Office	4	3	Wall	Concrete	Intact	0.170 K	-0.456 L	386		Neg

Leadsafe, if

# XRF and Lab Results

Customer: Leadsafe Environmental  
1-800-392-6468

Project Name: Delta Environmental  
2-5-02

Site Name: 83 Bassett Rd. - 1st Floor  
North Haven, CT.

Action Level 1.000 mg /cm2 Lab 1.000 mg /cm2

Total Assays Reported 163

#	Site	Room Tested	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
16720	1111	Office	4	4	Wall	Concrete	Intact	-0.463 K	-0.263 L	386		Neg
16721	1111	Classroom	3	1	Wall	Concrete	Intact	0.385 K	-0.247 L	386		Neg
16722	1111	Classroom	3	1	Door Buck	Thin Metal	Intact	0.629 K	0.341 L	386		Neg
16723	1111	Classroom	3	3	Wall	Concrete	Intact	0.103 K	0.250 L	386		Neg
16724	1111	Classroom	3	4	Column	Concrete	Intact	-0.124 K	-0.785 L	386		Neg
16725	1111	Classroom	3	4	Wall	Concrete	Intact	0.043 K	-0.379 L	386		Neg
16726	1111	Classroom	4	1	Wall	Concrete	Intact	-0.137 K	0.160 L	386		Neg
16727	1111	Classroom	4	1	Door Buck	Thin Metal	Intact	0.938 K	0.557 L	386		Incl
16728	1111	Classroom	4	2	Wall	Concrete	Intact	0.420 K	-0.308 L	386		Neg
16729	1111	Classroom	4	4	Wall	Concrete	Intact	-0.609 K	-0.480 L	386		Neg
16730	1111	Auditorium	1	1	Door Buck	Thin Metal	Intact	0.656 K	0.729 L	386		Neg
16731	1111	Auditorium	1	1	Door	Thin Metal	Intact	-0.667 K	0.167 L	386		Neg
16732	1111	Auditorium	1	1	Ceiling	Wallboard	Intact	-0.035 K	-0.012 L	386		Neg
16733	1111	Auditorium	1	2	Chair	Thin Metal	Intact	-0.090 K	-0.215 L	386		Neg
16734	1111	Auditorium	1	2	Chair	Thin Metal	Intact	-0.340 K	-0.390 L	386		Neg
16735	1111	Auditorium	1	4	Chair	Thin Metal	Intact	-0.523 K	0.314 L	386		Neg
16736	1111	Auditorium	1	4	Chair	Thin Metal	Intact	-0.213 K	0.358 L	386		Neg
16737	1111	Stairway	2	1	Wall	Concrete	Intact	-0.131 K	-0.274 L	386		Neg
16738	1111	Stairway	2	2	Wall	Concrete	Intact	-1.561 K	0.107 L	386		Neg
16739	1111	Stairway	2	2	Radiator	Thin Metal	Intact	0.166 K	-0.004 L	386		Neg
16740	1111	Stairway	2	3	Door Buck	Thin Metal	Intact	0.742 K	0.477 L	386		Neg

# XRF and Lab Results

Customer: Leadsafe Environmental  
1-800-392-6468

Project Name: Delta Environmental  
2-5-02

Site Name: 83 Bassett Rd. - 1st Floor  
North Haven, CT.

Action Level 1,000 mg /cm2 Lab 1,000 mg /cm2

Total Assays Reported 163

#	Site	Room Tested	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
16741	1111	Stairway	2	3	Door	Thin Metal	Intact	0.248 K	0.516 L	386		Neg
16742	1111	Stairway	2	3	Wall	Concrete	Intact	-1.269 K	-0.124 L	386		Neg
16743	1111	Stairway	2	4	Stair Riser	Thin Metal	Intact	0.378 K	0.825 L	386		Neg
16744	1111	Stairway	2	4	Stair Riser	Thin Metal	Intact	0.141 K	0.425 L	386		Neg
16745	1111	Stairway	2	4	Stair Riser	Thin Metal	Intact	0.263 K	0.385 L	386		Neg
16746	1111	Stairway	2	4	Stair Riser	Thin Metal	Intact	0.367 K	0.520 L	386		Neg
16747	1111	Stairway	2	4	Stair Riser	Thin Metal	Intact	0.392 K	0.292 L	386		Neg
16748	1111	Stairway	2	4	Stair Riser	Thin Metal	Intact	0.499 K	0.613 L	386		Neg
16749	1111	Stairway	2	4	Stair Riser	Thin Metal	Intact	0.476 K	0.577 L	386		Neg
16750	1111	Stairway	2	4	Stringer	Thin Metal	Intact	0.555 K	0.451 L	386		Neg
16751	1111	Hallway	3	1	Wall	Concrete	Intact	-1.776 K	-0.448 L	386		Neg
16752	1111	Hallway	3	2	Wall	Concrete	Intact	0.215 K	-0.125 L	386		Neg
16753	1111	Hallway	3	3	Wall	Concrete	Intact	-0.365 K	-0.300 L	386		Neg
16754	1111	Hallway	3	4	Wall	Concrete	Intact	-1.146 K	-0.144 L	386		Neg
16755	1111	Hallway	3	4	Door Buck	Thin Metal	Intact	1.357 K	0.740 L	386		Neg
16756	1111	Hallway	3	4	Door	Thin Metal	Intact	0.378 K	0.310 L	386		Neg
16757	1111	Maintenance	1	1	Wall	Concrete	Intact	0.499 K	0.134 L	386		Neg
16758	1111	Maintenance	1	3	Wall	Concrete	Intact	-0.692 K	0.084 L	386		Neg
16759	1111	Maintenance	1	3	Door Buck	Thin Metal	Intact	0.345 K	0.820 L	386		Neg
16760	1111	Maintenance	1	3	Door	Thin Metal	Intact	-0.195 K	0.675 L	386		Neg
16761	1111	Maintenance	1	1	Wall	Wallboard	Intact	-0.061 K	0.237 L	386		Neg

# XRF and Lab Results

Customer: Leadsafe Environmental  
1-800-392-6468

Project Name: Delta Environmental  
2-5-02

Site Name: 83 Bassett Rd.- 1st Floor  
North Haven, CT.

Action Level 1,000 mg /cm2 Lab 1,000 mg /cm2

Total Assays Reported 163

#	Site	Room Tested	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
16762	1111	Maintenance	1	4	Wall	Wallboard	Intact	-0.335 K	-0.336 L	386		Neg
16763	1111	Classroom	5	1	Wall	Wallboard	Intact	0.189 K	-0.300 L	386		Neg
16764	1111	Classroom	5	2	Wall	Concrete	Intact	-1.410 K	0.158 L	386		Neg
16765	1111	Classroom	5	2	Door Buck	Thin Metal	Intact	0.086 K	0.449 L	386		Neg
16766	1111	Classroom	5	2	Door	Thin Metal	Intact	-0.069 K	0.527 L	386		Neg
16767	1111	Classroom	5	3	Wall	Wallboard	Intact	0.109 K	0.194 L	386		Neg
16768	1111	Classroom	5	4	Wall	Wallboard	Intact	-0.337 K	-0.873 L	386		Neg
16769	1111	Conference Room	1	1	Wall	Concrete	Intact	-0.230 K	-0.308 L	386		Neg
16770	1111	Conference Room	1	2	Wall	Concrete	Intact	-0.219 K	-0.166 L	386		Neg
16771	1111	Conference Room	1	2	Door	Thin Metal	Intact	0.154 K	-0.349 L	386		Neg
16772	1111	Conference Room	1	3	Column	Concrete	Intact	-1.230 K	0.087 L	386		Neg
16773	1111	Conference Room	1	4	Wall	Concrete	Intact	-0.307 K	0.265 L	386		Neg
16774	1111	Cafeteria	1	1	Wall	Concrete	Intact	0.044 K	0.001 L	386		Neg
16775	1111	Cafeteria	1	1	Radiator	Thin Metal	Intact	0.155 K	0.070 L	386		Neg
16776	1111	Cafeteria	1	2	Wall	Concrete	Intact	0.355 K	-0.133 L	386		Neg
16777	1111	Cafeteria	1	2	Column	Concrete	Intact	0.143 K	0.067 L	386		Neg
16778	1111	Cafeteria	1	3	Wall	Concrete	Intact	-1.926 K	-0.380 L	386		Neg
16779	1111	Cafeteria	1	4	Wall	Concrete	Intact	-1.718 K	-0.445 L	386		Neg
16780	1111	Cafeteria	1	4	Wall	Concrete	Intact	-0.353 K	0.040 L	386		Neg
16781	1111	Cafeteria	1	4	Door Buck	Thin Metal	Intact	0.821 K	0.587 L	386		Neg
16782	1111	Kitchen	1	1	Wall	Concrete	Intact	-1.010 K	-0.527 L	386		Neg

# XRF and Lab Results

Customer: Leadsafe Environmental  
1-800-392-6468

Project Name: Delta Environmental  
2-5-02

Site Name: 83 Bassett Rd. - 1st Floor  
North Haven, CT.

Action Level 1.000 mg /cm2 Lab 1.000 mg /cm2

Total Assays Reported 163

#	Site	Room Tested	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
16783	1111	Kitchen	1	2	Wall	Concrete	Intact	0.460 K	-0.110 L	386		Neg
16784	1111	Kitchen	1	2	Door Buck	Thin Metal	Intact	0.868 K	0.760 L	386		Neg
16785	1111	Kitchen	1	3	Wall	Concrete	Intact	-0.074 K	-0.206 L	386		Neg
16786	1111	Kitchen	1	4	Wall	Concrete	Intact	-0.348 K	-0.231 L	386		Neg
16787	1111	Stairway	3	1	Wall	Concrete	Intact	-0.516 K	-0.142 L	386		Neg
16788	1111	Stairway	3	1	Door Buck	Thin Metal	Intact	0.898 K	0.660 L	386		Neg
16789	1111	Stairway	3	1	Door	Thin Metal	Intact	0.007 K	-0.028 L	386		Neg
16790	1111	Stairway	3	2	Wall	Concrete	Intact	-0.452 K	-0.098 L	386		Neg
16791	1111	Stairway	3	3	Stair Riser	Thin Metal	Intact	0.847 K	0.432 L	386		Neg
16792	1111	Stairway	3	3	Stair Riser	Thin Metal	Intact	0.381 K	0.708 L	386		Neg
16793	1111	Stairway	3	3	Stair Riser	Thin Metal	Intact	0.796 K	0.517 L	386		Neg
16794	1111	Stairway	3	3	Stair Riser	Thin Metal	Intact	0.489 K	0.419 L	386		Neg
16795	1111	Stairway	3	3	Stair Riser	Thin Metal	Intact	0.732 K	0.672 L	386		Neg
16796	1111	Stairway	3	3	Stair Riser	Thin Metal	Intact	0.410 K	0.589 L	386		Neg
16797	1111	Stairway	3	3	Stringer	Thin Metal	Intact	0.049 K	0.546 L	386		Neg
16798	1111	Stairway	3	4	Wall	Concrete	Intact	-0.096 K	0.259 L	386		Neg

leadsafe, inc.

# XRF and Lab Results

Customer: Leadsafe Environmental  
1-800-392-6468

Project Name: Delta Environmental  
2-5-02

Site Name: 83 Bassett Rd. - 2nd Floor  
North Haven, CT.

Action Level 1.000 mg /cm2 Lab 1.000 mg /cm2

Total Assays Reported 81

#	Site	Room Tested	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
16800	2222	Calibration	*	*	*	*	*	0.000 X	0.000 X	0		
16801	2222	Hallway	1	1	Wall	Concrete	Intact	-0.334 K	-0.080 L	0		Neg
16802	2222	Hallway	1	3	Wall	Concrete	Intact	-0.232 K	0.193 L	0		Neg
16803	2222	Hallway	1	4	Wall	Concrete	Intact	-1.988 K	-0.100 L	0		Neg
16804	2222	Classroom	1	1	Wall	Concrete	Intact	-1.645 K	0.529 L	0		Neg
16805	2222	Classroom	1	2	Wall	Concrete	Intact	-0.091 K	-0.255 L	0		Neg
16806	2222	Classroom	1	2	Door Buck	Thin Metal	Intact	0.634 K	0.779 L	0		Neg
16807	2222	Classroom	1	3	Wall	Concrete	Intact	-1.078 K	-0.465 L	0		Neg
16808	2222	Classroom	1	4	Wall	Wallboard	Intact	0.304 K	-0.013 L	0		Neg
16809	2222	Hallway	2	1	Wall	Concrete	Intact	-1.008 K	0.118 L	0		Neg
16810	2222	Hallway	2	2	Wall	Concrete	Intact	-0.433 K	-0.277 L	0		Neg
16811	2222	Hallway	2	2	Lockers	Thin Metal	Intact	1.059 K	0.933 L	0		Incl
16812	2222	Hallway	2	2	Lockers	Thin Metal	Intact	0.951 K	1.094 L	0		Incl
16813	2222	Hallway	2	2	Lockers	Thin Metal	Intact	1.731 K	1.341 L	0		Pos
16814	2222	Hallway	2	2	Lockers	Thin Metal	Intact	1.228 K	1.102 L	0		Pos
16815	2222	Hallway	2	4	Wall	Concrete	Intact	0.292 K	-0.015 L	0		Neg
16816	2222	Classroom	2	1	Wall	Concrete	Intact	-0.014 K	0.234 L	0		Neg
16817	2222	Classroom	2	2	Wall	Concrete	Intact	-0.228 K	-0.062 L	0		Neg
16818	2222	Classroom	2	2	Door Buck	Thin Metal	Intact	0.749 K	0.620 L	0		Neg
16819	2222	Classroom	2	3	Wall	Concrete	Intact	0.219 K	-0.369 L	0		Neg
16820	2222	Mens Room	1	1	Wall	Concrete	Intact	-0.949 K	-0.143 L	0		Neg



# XRF and Lab Results

Customer: Leadsafe Environmental  
1-800-392-6468

Project Name: Delta Environmental  
2-5-02

Site Name: 83 Bassett Rd. - 2nd Floor  
North Haven, CT.

Action Level 1.000 mg /cm2 Lab 1.000 mg /cm2

Total Assays Reported 81

#	Site	Room Tested	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
16821	2222	Mens Room	1	1	Wall	Wallboard	Intact	0.314 K	0.149 L	0		Neg
16822	2222	Mens Room	1	2	Toilet Stall	Thin Metal	Intact	-0.184 K	0.494 L	0		Neg
16823	2222	Mens Room	1	3	Wall	Concrete	Intact	-0.097 K	0.210 L	0		Neg
16824	2222	Mens Room	1	4	Wall	Concrete	Intact	-0.013 K	-0.226 L	0		Neg
16825	2222	Mens Room	1	4	Door	Thin Metal	Intact	0.452 K	0.170 L	0		Neg
16826	2222	Hallway	3	1	Wall	Concrete	Intact	-0.769 K	0.585 L	0		Neg
16827	2222	Hallway	3	1	Lockers	Thin Metal	Intact	0.194 K	0.634 L	0		Neg
16828	2222	Hallway	3	1	Lockers	Thin Metal	Intact	0.094 K	0.435 L	0		Neg
16829	2222	Hallway	3	1	Lockers	Thin Metal	Intact	0.375 K	0.494 L	0		Neg
16830	2222	Hallway	3	1	Lockers	Thin Metal	Intact	0.036 K	0.304 L	0		Neg
16831	2222	Hallway	3	1	Lockers	Thin Metal	Intact	0.366 K	0.934 L	0		Neg
16832	2222	Hallway	3	1	Wall	Wallboard	Intact	0.336 K	-0.109 L	0		Neg
16833	2222	Hallway	3	3	Wall	Concrete	Intact	0.041 K	-0.171 L	0		Neg
16834	2222	Classroom	3	1	Wall	Concrete	Intact	0.393 K	-0.093 L	0		Neg
16835	2222	Classroom	3	2	Wall	Concrete	Intact	-0.317 K	-0.357 L	0		Neg
16836	2222	Classroom	3	2	Wall	Concrete	Intact	-1.959 K	-0.807 L	0		Neg
16837	2222	Classroom	3	2	Wall	Concrete	Intact	-2.918 K	-0.056 L	0		Neg
16838	2222	Classroom	3	3	Wall	Concrete	Intact	-0.228 K	-0.654 L	0		Neg
16839	2222	Classroom	3	3	Door Buck	Thin Metal	Intact	0.950 K	0.887 L	0		Incl
16840	2222	Classroom	4	1	Wall	Concrete	Intact	0.359 K	-0.008 L	0		Neg
16841	2222	Classroom	4	2	Wall	Concrete	Intact	-0.575 K	-0.225 L	0		Neg

leadsafe, inc

# XRF and Lab Results

Customer: Leadsafe Environmental  
1-800-392-6468

Project Name: Delta Environmental  
2-5-02

Site Name: 83 Bassett Rd. - 2nd Floor  
North Haven, CT.

Action Level 1.000 mg /cm2 Lab 1.000 mg /cm2

Total Assays Reported

81

#	Site	Room Tested	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
16842	2222	Classroom	4	3	Wall	Concrete	Intact	-0.185 K	-0.286 L	0		Neg
16843	2222	Classroom	4	3	Door Buck	Thin Metal	Intact	0.979 K	0.960 L	0		Incl
16844	2222	Classroom	4	4	Wall	Concrete	Intact	-0.875 K	0.243 L	0		Neg
16845	2222	Elevator Bank	1	3	Door	Thin Metal	Intact	0.415 K	0.519 L	0		Neg
16846	2222	Elevator Bank	1	4	Door Case	Thin Metal	Intact	0.354 K	1.010 L	0		Neg
16847	2222	Classroom	5	1	Wall	Concrete	Intact	0.294 K	0.030 L	0		Neg
16848	2222	Classroom	5	1	Door Buck	Thin Metal	Intact	0.697 K	0.871 L	0		Neg
16849	2222	Classroom	5	2	Wall	Concrete	Intact	-0.224 K	0.123 L	0		Neg
16850	2222	Classroom	5	2	Column	Concrete	Intact	-1.234 K	-0.273 L	0		Neg
16851	2222	Classroom	5	3	Wall	Concrete	Intact	0.259 K	-0.364 L	0		Neg
16852	2222	Classroom	5	4	Wall	Concrete	Intact	-0.187 K	-0.520 L	0		Neg
16853	2222	Classroom	6	1	Wall	Concrete	Intact	-0.966 K	0.996 L	0		Neg
16854	2222	Classroom	6	1	Door Buck	Thin Metal	Intact	0.783 K	0.771 L	0		Neg
16855	2222	Classroom	6	2	Wall	Concrete	Intact	0.109 K	0.101 L	0		Neg
16856	2222	Classroom	6	3	Wall	Concrete	Intact	-0.096 K	0.022 L	0		Neg
16857	2222	Classroom	6	4	Wall	Concrete	Intact	0.573 K	0.009 L	0		Neg
16858	2222	Classroom	7	1	Wall	Concrete	Intact	0.287 K	-0.324 L	0		Neg
16859	2222	Classroom	7	1	Door Buck	Thin Metal	Intact	0.829 K	0.890 L	0		Neg
16860	2222	Classroom	7	2	Wall	Concrete	Intact	-1.445 K	0.128 L	0		Neg
16861	2222	Classroom	7	3	Wall	Concrete	Intact	-0.693 K	-0.291 L	0		Neg
16862	2222	Classroom	7	4	Wall	Concrete	Intact	-0.046 K	-0.440 L	0		Neg



leadsafe, ir

# XRF and Lab Results

Customer: Leadsafe Environmental  
1-800-392-6468

Project Name: Delta Environmental  
2-5-02

Site Name: 83 Bassett Rd. - 2nd Floor  
North Haven, CT.

Action Level 1,000 mg /cm2 Lab 1,000 mg /cm2

Total Assays Reported 81

#	Site	Room Tested	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab.	Result
16863	2222	Classroom	7	4	Column	Concrete	Intact	0.359 K	-0.330 L	0		Neg
16864	2222	Hallway	4	3	Lockers	Thin Metal	Intact	0.368 K	0.197 L	0		Neg
16865	2222	Hallway	4	3	Lockers	Thin Metal	Intact	0.250 K	0.299 L	0		Neg
16866	2222	Hallway	4	3	Lockers	Thin Metal	Intact	0.300 K	0.328 L	0		Neg
16867	2222	Classroom	8	2	Wall	Wallboard	Intact	-0.017 K	0.679 L	0		Neg
16868	2222	Classroom	8	2	Door Buck	Thin Metal	Intact	0.803 K	0.835 L	0		Neg
16869	2222	Classroom	8	3	Wall	Wallboard	Intact	-0.054 K	0.003 L	0		Neg
16870	2222	Classroom	8	4	Wall	Wallboard	Intact	-0.069 K	-0.626 L	0		Neg
16871	2222	Hallway	5	2	Wall	Wallboard	Intact	0.200 K	-0.267 L	0		Neg
16872	2222	Hallway	5	2	Lockers	Thin Metal	Intact	1.780 K	1.046 L	0		Pos
16873	2222	Hallway	5	2	Lockers	Thin Metal	Intact	1.064 K	1.099 L	0		Incl
16874	2222	Hallway	5	2	Lockers	Thin Metal	Intact	2.394 K	1.332 L	0		Pos
16875	2222	Hallway	5	4	Wall	Concrete	Intact	-0.290 K	0.394 L	0		Neg
16876	2222	Classroom	9	1	Wall	Concrete	Intact	0.098 K	-0.232 L	0		Neg
16877	2222	Classroom	9	2	Wall	Concrete	Intact	-0.192 K	-0.373 L	0		Neg
16878	2222	Classroom	9	3	Wall	Concrete	Intact	0.151 K	-0.041 L	0		Neg
16879	2222	Classroom	9	4	Wall	Wallboard	Intact	-0.007 K	-0.053 L	0		Neg
16880	2222	Classroom	9	4	Door Buck	Thin Metal	Intact	0.815 K	0.849 L	0		Neg

# XRF and Lab Results

Customer: Leadsafe Environmental  
1-800-392-6468

Project Name: Delta Environmental  
2-5-02

Site Name: 83 Bassett Rd. - Ground Floor  
North Haven, CT.

Action Level 1,000 mg /cm2      Lab 1,000 mg /cm2

Total Assays Reported      25

#	Site	Room Tested	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
16882	3333	Calibration	*	*	*	*	*	0.000 X	0.000 X	0		
16883	3333	Hallway	1	1	Wall	Concrete	Intact	0.125 K	0.078 L	0		Neg
16884	3333	Hallway	1	3	Wall	Wallboard	Intact	0.137 K	0.040 L	0		Neg
16885	3333	Hallway	1	3	Lockers	Thin Metal	Intact	0.011 K	0.469 L	0		Neg
16886	3333	Hallway	1	3	Lockers	Thin Metal	Intact	-0.423 K	0.370 L	0		Neg
16887	3333	Classroom	1	1	Wall	Concrete	Intact	0.280 K	-0.029 L	0		Neg
16888	3333	Classroom	1	1	Door Buck	Thin Metal	Intact	0.993 K	0.737 L	0		Incl
16889	3333	Classroom	1	3	Wall	Concrete	Intact	0.095 K	0.070 L	0		Neg
16890	3333	Classroom	1	4	Wall	Concrete	Intact	0.238 K	-0.150 L	0		Neg
16891	3333	Classroom	2	1	Wall	Concrete	Intact	-0.339 K	-0.198 L	0		Neg
16892	3333	Classroom	2	1	Door Buck	Thin Metal	Intact	0.839 K	0.791 L	0		Neg
16893	3333	Classroom	2	3	Wall	Concrete	Intact	0.489 K	-0.021 L	0		Neg
16894	3333	Classroom	2	4	Wall	Concrete	Intact	-0.428 K	0.133 L	0		Neg
16895	3333	Mens Room	1	1	Wall	Wallboard	Intact	0.223 K	-0.014 L	0		Neg
16896	3333	Mens Room	1	3	Wall	Concrete	Intact	0.358 K	-0.342 L	0		Neg
16897	3333	Mens Room	1	4	Wall	Concrete	Intact	-0.950 K	0.725 L	0		Neg
16898	3333	Mens Room	1	3	Door Buck	Thin Metal	Intact	1.176 K	0.615 L	0		Incl
16899	3333	Mens Room	1	3	Door Buck	Thin Metal	Intact	0.799 K	0.928 L	0		Neg
16900	3333	Stairway	1	1	Wall	Concrete	Intact	-0.123 K	-0.071 L	0		Neg
16901	3333	Stairway	1	4	Wall	Concrete	Intact	0.226 K	-0.202 L	0		Neg
16902	3333	Stairway	1	3	Stair Tread	Thin Metal	Intact	0.591 K	0.490 L	0		Neg

leadsafe, inc

## XRF and Lab Results

Customer: Leadsafe Environmental  
1-800-392-6468

Project Name: Delta Environmental  
2-5-02

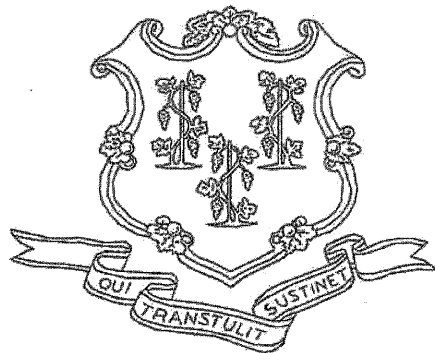
Site Name: 83 Bassett Rd. - Ground Floor  
North Haven, CT.

Action Level 1.000 mg /cm2      Lab 1.000 mg /cm2

Total Assays Reported      25

#	Site	Room Tested	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
16903	3333	Stairway	1	3	Stair Tread	Thin Metal	Intact	0.649 K	0.430 L	0		Neg
16904	3333	Stairway	1	3	Stair Tread	Thin Metal	Intact	0.683 K	0.356 L	0		Neg
16905	3333	Stairway	1	3	Stringer	Thin Metal	Intact	0.663 K	0.503 L	0		Neg
16906	3333	Calibration	*	*	*	*	*	0.872 K	1.117 L	386		Incl

ASBESTOS INSPECTION  
GATEWAY COMMUNITY TECHNICAL COLLEGE  
NORTH HAVEN CAMPUS  
88 BASSETT ROAD  
NORTH HAVEN, CONNECTICUT  
DPW Building No. 46088



PREPARED FOR:

Mr. Gerald S. Glassman  
Chief of Project Management  
Department of Public Works  
165 Capitol Avenue, Room 280  
Hartford, CT 06106

PROJECT NUMBER: BI-CTC-392-F (ASB)

REPORT DATE: May 2002

## TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE NUMBER</u>
1.0 Introduction .....	1
2.0 Building Description .....	1
3.0 Summary of Previous Asbestos Abatement .....	1
4.0 Asbestos Survey .....	3
4.1 Asbestos Sampling Procedures .....	3
4.2 Asbestos Analytical Procedures .....	3
4.3 Asbestos Analytical Results .....	3
5.0 Discussion and Recommendations .....	5
6.0 Estimated Cost For Asbestos Abatement .....	6

## TABLES

4-1 Bulk Sample Summary for Suspect Asbestos-Containing Materials
4-2 Asbestos-Containing Material
4-3 Non-Asbestos-Containing Material
6-1 Asbestos Abatement Cost Estimate

## APPENDICES

APPENDIX A -	Inventory of Identified Asbestos-Containing Material
APPENDIX B -	Asbestos Bulk Sample Laboratory Data Sheets/Chain of Custody
APPENDIX C -	Data From Previous Asbestos Sampling
APPENDIX D -	Laboratory and Inspector Accreditations
APPENDIX E -	Building Diagrams



## 1.0 INTRODUCTION

This report summarizes the results of an asbestos inspection conducted by DELTA Environmental Services, Inc. (DELTA) for the North Haven Campus of Gateway Community Technical College (DPW Building Number 46088) located at 88 Bassett Road in North Haven, Connecticut. The project consisted of: review of available building records; physical inspection of the building to determine the quantities and locations of asbestos-containing materials (ACM); and bulk sampling of suspected asbestos-containing materials (ACM).

## 2.0 BUILDING DESCRIPTION

Gateway's North Haven campus is located at 88 Bassett Road and consists of a single three-story building constructed circa 1968. The building has 162,000± square feet of gross floor area.

The building is of concrete and steel construction and consists of classrooms, offices, an auto shop area, auditorium, library and cafeteria. The interior finishes in the building generally consist of vinyl floor tile or carpet over concrete floors, lay-in suspended tile ceilings, and concrete block/sheetrock walls.

Room numbers referred to in this report correspond to the floor plans included in Appendix E.

## 3.0 SUMMARY OF PREVIOUS ASBESTOS ABATEMENT

DELTA's review of DPW files indicates that the following asbestos abatement projects have been performed at the building:

HISTORY OF ASBESTOS ABATEMENT PROJECTS		
DOCUMENT (DATE)	LOCATION	WORK DESCRIPTION
EMS Report (2/15/90)	Various Areas	Removal of asbestos pipe fittings from "two mechanical rooms", "ground floor storage rooms", Second Floor corridor, Guidance Conference Room, Office Supply Room, Administrative Services Office, Room 35, Copy Machine Room, President's Office, President's Reception Area, Rooms 101, 102, 105, 107-109, Cafeteria Storage Room, Boiler Room, Corridors, Locker Rooms, and Gym Storage area. Project duration was 12/19/89 to 1/22/90.



HISTORY OF ASBESTOS ABATEMENT PROJECTS		
EMS Report (3/2/90)	Boiler Room	Removal of boiler room thermal systems insulation including hot water tank insulation, pipe fittings, and boiler breeching.
EMS Report (7/91)	Rooms 202, 203, 304, 314, Cafeteria and corridor.	Removal of a total of 2,050 SF of floor tile and mastic in Cafeteria, Room 202, Room 203, Room 304 and corridor near Room 314. Work consisted of spot removal to allow for work to repair "cracks in concrete beams."
EMS Report (5/9/94 - 8/26/94)	Various Areas	Removal of floor tile. Documentation indicates that in some cases, only loose or damaged ACM tiles were removed and leveling compound was poured over intact ACM tile and mastic for installation of new non-ACM tile. Transite board was also removed from the first floor lobby. Project duration was 5/9/94 to 8/26/94. It appears that the abatement area was very extensive, but the specific areas abated are not clearly defined in the report. Some of the abatement areas included the administrative offices, auditorium, conference room 113, the former gymnasium (Room 013), Rooms 203-204 and various stairwells.
EMS Report (9/29/94)	Roof	Abatement of south roof area.
EMS Report (10/94)	Roof	Abatement of gymnasium roof.
EMS Report (10/28 - 11/1/94)	"Lockers Area"	Removal of 100 square feet (SF) of Transite board.
EMS Report (2/17/98)	"Lower Bathroom"	Removal of asbestos pipe fittings using glovebags.
EMS Report (4/14 - 4/15/98)	Bathrooms	Removal of asbestos pipe fittings from: First Floor Central Wing Men's and Women's Bathrooms, First Floor Faculty Men's and Women's Bathrooms, First Floor Men's and Women's Handicapped Bathrooms, Second Floor Central Wing Men's Handicapped Bathroom, Second Floor Central Wing Faculty Women's Bathroom.



## **4.0 ASBESTOS SURVEY**

### **4.1 Asbestos Sampling Procedures**

Bulk samples of suspected ACM were collected by James P. McCarthy, P.E., of DELTA, a Connecticut Department of Public Health licensed inspector. Samples were collected using a clean knife or other appropriate tool after first wetting the material to be sampled to limit fiber release.

Samples were placed in dedicated sealable plastic bags and promptly transmitted to the analytical laboratory using strict chain of custody procedures. Sampling was performed in accordance with Environmental Protection Agency protocols, which require a minimum of three negative results in order to establish that a material does not contain asbestos.

### **4.2 Asbestos Analytical Procedures**

Analysis was performed by Chemscope, Inc., North Haven, Connecticut, a National Institute of Standards and Technology accredited laboratory. Analysis was performed using Polarized Light Microscopy (PLM) Method EPA 600. Point counting was used to more precisely quantify asbestos content for all samples found to contain less than ten percent asbestos during initial screening.

### **4.3 Asbestos Analytical Results**

The results of recent bulk sampling performed by DELTA are summarized in Table 4-1. Laboratory data sheets are included in Appendix B.

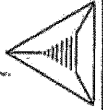
The survey identified the following asbestos-containing materials (ACM) in the building through analytical sampling: various types of floor tile and mastic throughout the building (including older 9" and newer 12"); pipe fitting insulation throughout the building (present with fiberglass pipe insulation); window frame caulk throughout the building; door frame caulk throughout the building; boiler insulation in the boiler room; and duct insulation in two second floor mechanical rooms.





**TABLE 4-1: BULK SAMPLE SUMMARY FOR SUSPECT ASBESTOS-CONTAINING MATERIALS**  
**GATEWAY COMMUNITY TECHNICAL COLLEGE**  
**NORTH HAVEN, CONNECTICUT**

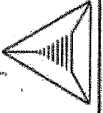
SAMPLE ID/DATE	LAB SAMPLE ID	MATERIAL	LOCATION	RESULTS
1	148-414-1	Tan 9" Floor Tile	Maintenance Shop 106	Not Analyzed
2	148-414-2	Tan 9" Floor Tile Mastic	Maintenance Shop 106	9% Chrysotile (Point Count)
3	148-414-3	Ceiling Plaster Brown Coat	Maintenance Shop 106	NAD
4	148-414-4	Ceiling Plaster Top Coat	Maintenance Shop 106	NAD
5	148-414-5	Sheetrock Joint Compound	Maintenance Shop 106	NAD
6	148-414-6	Sheetrock	Maintenance Shop 106	NAD
7	148-414-7	Sheetrock	Maintenance Shop 106	NAD
8	148-414-8	Glue Dot	Maintenance Shop 106	NAD
9	148-414-9	Glue Dot	Maintenance Shop 106	NAD
10	148-414-10	Glue Dot	Maintenance Shop 106	NAD
11	148-414-11	2' X 2' Rough Texture Armstrong Ceiling Tile	Corridor Near Room 106	NAD
12	148-414-12	2' X 2' Rough Texture Armstrong Ceiling Tile	Corridor Near Room 106	NAD
13	148-414-13	2' X 2' Rough Texture Armstrong Ceiling Tile	Corridor Near Room 106	NAD



**DELTA Environmental Services, Inc.**

**TABLE 4-1: BULK SAMPLE SUMMARY FOR SUSPECT ASBESTOS-CONTAINING MATERIALS**  
**GATEWAY COMMUNITY TECHNICAL COLLEGE**  
**NORTH HAVEN, CONNECTICUT**

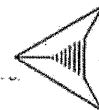
SAMPLE ID/DATE	LAB SAMPLE ID	MATERIAL	LOCATION	RESULTS
14	148-414-14	Mudded Pipe Fitting	Corridor Near Room 107	9% Chrysotile (Point Count)
15	148-414-15	Baseboard Molding Adhesive	Room 134	NAD
16	148-414-16	Baseboard Molding Adhesive	Room 134	NAD
17	148-414-17	Floor Levelastic/ Old Floor Tile Mastic	Room 134	5% Chrysotile (Point Count)
18	148-414-18	Floor Levelastic/ Old Floor Tile Mastic	Room 134	Not Analyzed*
19	148-414-19	Floor Levelastic/ Old Floor Tile Mastic	Room 134	Not Analyzed*
20	148-414-20	Window Glazing	Room 134	< 1% Chrysotile (Point Count)
21	148-414-21	Window Glazing	Room 134	< 1% Chrysotile (Point Count)
22	148-414-22	Molding Insulation Strip	Room 134	NAD
23	148-414-23	Window Frame Caulking	Room 134	5% Chrysotile (Point Count)
24	148-414-24	Window Frame Caulking	Room 134	Not Analyzed*
25	148-414-25	Window Frame Caulking	Room 134	Not Analyzed*
26	148-414-26	Floor Levelastic	Vestibule to Room 132	NAD



**DELTA Environmental Services, Inc.**

**TABLE 4-1: BULK SAMPLE SUMMARY FOR SUSPECT ASBESTOS-CONTAINING MATERIALS**  
**GATEWAY COMMUNITY TECHNICAL COLLEGE**  
**NORTH HAVEN, CONNECTICUT**

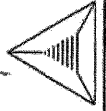
SAMPLE ID/DATE	LAB SAMPLE ID	MATERIAL	LOCATION	RESULTS
27	148-414-27	Brown Caulking at Wall Joint	Connecting Passage to Room 132	NAD
28	148-414-28	Window Frame Caulking	Room 230	10% Chrysotile
29	148-414-29	Baseboard Molding Adhesive	Room 230	NAD
30	148-414-30	Tan 9" Floor Tile	Room 230	3% Chrysotile (Point Count)
31	148-414-31	Baseboard Molding Adhesive	Second Floor Area of Refuge	NAD
32	148-414-32	Brown 12" Floor Tile	Second Floor Connecting Passage	< 1% Chrysotile (Point Count)
33	148-414-33	Brown 12" Floor Tile	Second Floor Connecting Passage	< 1% Chrysotile (Point Count)
34	148-414-34	Brown 12" Floor Tile	Second Floor Connecting Passage	< 1% Chrysotile (Point Count)
35	148-414-35	Mastic From Brown 12" Floor Tile	Second Floor Connecting Passage	10% Chrysotile
36	148-414-36	Light Gray Fibrous 1' X 1' Acoustical Tile with White Face	Second Floor Projection Booth (on wall)	NAD
37	148-414-37	Light Gray Fibrous 1' X 1' Acoustical Tile with White Face	Second Floor Projection Booth (on wall)	NAD



**DELTA Environmental Services, Inc.**

**TABLE 4-1: BULK SAMPLE SUMMARY FOR SUSPECT ASBESTOS-CONTAINING MATERIALS  
GATEWAY COMMUNITY TECHNICAL COLLEGE  
NORTH HAVEN, CONNECTICUT**

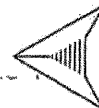
<b>SAMPLE ID/DATE</b>	<b>LAB SAMPLE ID</b>	<b>MATERIAL</b>	<b>LOCATION</b>	<b>RESULTS</b>
38	148-414-38	Light Gray Fibrous 1' X 1' Acoustical Tile with White Face	Second Floor Projection Booth (on wall)	NAD
39	148-414-39	Acoustical Board Behind 1' X 1' Ceiling Tile	Second Floor Projection Booth	NAD
40	148-414-40	Acoustical Board Behind 1' X 1' Ceiling Tile	Second Floor Projection Booth	NAD
41	148-414-41	Acoustical Board Behind 1' X 1' Ceiling Tile	Second Floor Projection Booth	NAD
42	148-414-42	Tan Granite Pattern 12" Floor Tile	Second Floor Projection Booth	7% Chrysotile (Point Count)
43	148-414-43	Tan Granite Pattern 12" Floor Tile	Second Floor Projection Booth	Not Analyzed*
44	148-414-44	Tan Granite Pattern 12" Floor Tile	Second Floor Projection Booth	Not Analyzed*
45	148-414-45	Mastic From Tan Granite Pattern 12" Floor Tile	Second Floor Projection Booth	13% Chrysotile
46	148-414-46	Door Frame Caulking	Second Floor Projection Booth	7% Chrysotile (Point Count)
47	148-414-47	Sheetrock Joint Compound	Second Floor Videoconference Center	NAD



**DELTA Environmental Services, Inc.**

**TABLE 4-1: BULK SAMPLE SUMMARY FOR SUSPECT ASBESTOS-CONTAINING MATERIALS**  
**GATEWAY COMMUNITY TECHNICAL COLLEGE**  
**NORTH HAVEN, CONNECTICUT**

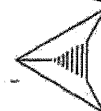
SAMPLE ID/DATE	LAB SAMPLE ID	MATERIAL	LOCATION	RESULTS
48	148-414-48	Sheetrock Joint Compound	Second Floor Videoconference Center	NAD
49	148-414-49	Sheetrock Joint Compound	Second Floor Videoconference Center	NAD
50	148-414-50	Wall Plaster Brown Coat	Second Floor Videoconference Center	NAD
51	148-414-51	Wall Plaster Both Coats	Second Floor Videoconference Center	NAD
52	148-414-52	Wall Plaster Top Coat	Second Floor Videoconference Center	NAD
53	148-414-53	Beige Gray Fibrous 1' X 1' Ceiling Tile with Off- White Face	Room 213	NAD
54	148-414-54	Beige Gray Fibrous 1' X 1' Ceiling Tile with Off- White Face	Room 213	NAD
55	148-414-55	Beige Gray Fibrous 1' X 1' Ceiling Tile with Off- White Face	Room 213	NAD
56	148-414-56	Glue Dot From Beige Gray Fibrous 1' X 1' Ceiling Tile with Off- White Face	Room 213	NAD



**DELTA Environmental Services, Inc.**

**TABLE 4-1: BULK SAMPLE SUMMARY FOR SUSPECT ASBESTOS-CONTAINING MATERIALS  
GATEWAY COMMUNITY TECHNICAL COLLEGE  
NORTH HAVEN, CONNECTICUT**

SAMPLE ID/DATE	LAB SAMPLE ID	MATERIAL	LOCATION	RESULTS
57	148-414-57	Glue Dot From Beige Gray Fibrous 1' X 1' Ceiling Tile with Off-White Face	Room 213	NAD
58	148-414-58	Glue Dot From Beige Gray Fibrous 1' X 1' Ceiling Tile with Off-White Face	Room 213	NAD
59	148-414-59 148-414-60	Baseboard Molding Adhesive Wall Plaster	Room 213	NAD NAD
60	148-414-61	Acoustical Wall Panel	Room 213	NAD
61	148-553-1	Ductwork Joint Caulk	Room 111	NAD
62	148-553-2	Boiler Breeching	Boiler Room	NAD
63	148-553-3	Boiler Insulation	Boiler Room	20% Chrysotile
64	148-553-4	Caulk at Boiler Flue	Boiler Room	NAD
65	149-53-1	Spray-on Fireproofing	Gym Breezeway Above Suspended Ceiling	NAD
66	149-53-2	Spray-on Fireproofing	Gym Breezeway Above Suspended Ceiling	NAD



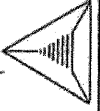
**DELTA Environmental Services, Inc.**

**TABLE 4-1: BULK SAMPLE SUMMARY FOR SUSPECT ASBESTOS-CONTAINING MATERIALS**  
**GATEWAY COMMUNITY TECHNICAL COLLEGE**  
**NORTH HAVEN, CONNECTICUT**

SAMPLE ID/DATE	LAB SAMPLE ID	MATERIAL	LOCATION	RESULTS
67	149-53-3	Spray-on Fireproofing	Gym Breezeway Above Suspended Ceiling	NAD

**NOTE: "NAD" INDICATES NO ASBESTOS DETECTED**

\* EPA protocols consider one positive result as confirmation that a material contains asbestos. If the first sample of a material is found to contain asbestos, no further confirmation is necessary and any additional samples are therefore not analyzed.



**DELTA Environmental Services, Inc.**

Asbestos-containing floor tile is present throughout most of the building. The tile is generally exposed (uncovered), though there are some areas where asbestos-containing tile and mastic is present below carpet and floor leveling compound. DELTA's review of documentation from a 1994 abatement project conducted in the building indicates that partial floor tile removal was conducted in some areas. Apparently, only damaged tiles were removed, and the remaining intact tile (and all asbestos-containing mastic) was left in place and covered with a thick layer of leveling compound and then carpeting.

Domestic hot and cold water and heating system piping throughout the building is insulated with fiberglass. Some of the pipe elbows are insulated with fiberglass, though there are many older type mudded fittings which were found to contain asbestos. The locations are identified in the table in Appendix A. The majority of the accessible fittings are concealed above suspended ceilings. It is expected that a large number of additional fittings are enclosed behind concrete block walls.

Interior fire door core material in the building was not sampled but is presumed to contain asbestos. This material is unlikely to release asbestos fibers unless the door is damaged in some way.

Roofing material was not sampled by DELTA. As discussed in Section 3.0, a roofing abatement project was conducted at the school in 1994, though it is possible that some asbestos-containing roofing material remains. Roofing material is generally nonfriable and unlikely to release asbestos fibers unless it is disturbed via roof patching or replacement.

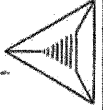
Materials found not to contain asbestos included: plaster walls and ceilings present in isolated areas; sheetrock and joint compound; spray-on fireproofing above the suspended ceiling in the gym breezeway area; adhesive on vinyl baseboard moldings throughout the building; various types of ceiling tile throughout the building; window glazing compound; glue dots from ceiling tile; acoustical board; boiler breeching and boiler flue caulk.





**TABLE 4-2: ASBESTOS-CONTAINING MATERIAL  
GATEWAY COMMUNITY TECHNICAL COLLEGE  
NORTH HAVEN, CONNECTICUT**

HOMOGENEOUS AREA NUMBER	MATERIAL DESCRIPTION	LOCATION	ASBESTOS TYPE AND CONTENT (%)
30	Tan 9" Floor Tile	Corridors, Stairwell D, Room 105, 106, 106D, 107, 107C, 110, 122, 129, 201A, 208, 208C, 208D, 222, 222A, 223, 229, 233A, 235	3% Chrysotile
2	Mastic from Above		9% Chrysotile
ATA-01	Red 9" Floor Tile	Corridors, Stairwell D, Cafeteria	> 1% Chrysotile (TEM)
2	Mastic From Above		9% Chrysotile
EMS-14	Green 9" Floor Tile with White Streaks	Corridors, Stairwell D, Room 234A	2% Chrysotile
2	Mastic From Above		9% Chrysotile
ATA-5	Light Gray 9" Floor Tile	Room 011, 012, 121, 126, 127, 128, 221A, 224, 226, 231, 232, 235	2% Chrysotile
EMS-46	Mastic from Above		6% Chrysotile
ATA-6	Pale Green 9" Floor Tile	Room 006, 007, 111, 112, 112A, 125, 136, 204, 220, 221, 225, 227, 228, 233, 234	2% Chrysotile
EMS-22	Mastic From Above		8% Chrysotile
ATA-44	Pale Pink/Burgundy 9" Floor Tile	Room 204 (patch)	> 1% Chrysotile (TEM)
EMS-22	Mastic From Above		8% Chrysotile
ATA-52	Gold 9" Floor Tile	Cafeteria, Room 012 (patch)	> 1% Chrysotile (TEM)
2	Mastic From Above		9% Chrysotile



**DELTA Environmental Services, Inc.**

**TABLE 4-2: ASBESTOS-CONTAINING MATERIAL  
GATEWAY COMMUNITY TECHNICAL COLLEGE  
NORTH HAVEN, CONNECTICUT**

42	Tan 12" Floor Tile	Second Floor Lab Wing Corridor, Room 201, 201B, 205, 211, 213, 215	7% Chrysotile
45	Mastic From Above		13% Chrysotile
35	Brown 12" Floor Tile Mastic	Second Floor Connecting Passage	10% Chrysotile
14, ATA-80	Pipe Fitting Insulation	Throughout Building	9 - 15% Chrysotile
23, 28	Window Caulk	Throughout Building	5 - 10% Chrysotile
46	Door Frame Caulk	Throughout Building	7% Chrysotile
63	Boiler Insulation	Boiler Room	20% Chrysotile
ATA-12	Duct Insulation	Second Floor Mechanical Rooms	40% Chrysotile

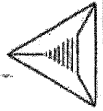
\* Some data from reports prepared by Applied Thermodynamics Associates (ATA) dated 8/12/97 and EnviroMed Services, Inc. (EMS) dated 4/18/94.



**DELTA Environmental Services, Inc.**

**TABLE 4-3: NON-ASBESTOS-CONTAINING MATERIAL  
GATEWAY COMMUNITY TECHNICAL COLLEGE  
NORTH HAVEN, CONNECTICUT**

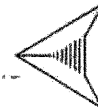
<b>HOMOGENEOUS AREA NUMBER</b>	<b>MATERIAL DESCRIPTION</b>	<b>LOCATION</b>	<b>ASBESTOS TYPE AND CONTENT (%)</b>
63	Acoustical Wall Panel	Room 213	NAD
ATA-35 through ATA-37	Spray-on Beam Insulation	Conference Room 113	NAD
15, 16, 29, 31, 59	Baseboard Molding Adhesive	Throughout	NAD
20, 21	Window Glazing	Throughout Building	NAD
22	Molding Insulation Strip Behind Radiator	Room 134	NAD
27	Brown Caulking at Brick Wall Joint	Connecting Passage to Room 132	NAD
32, 33, 34	Brown 12" Floor Tile	Second Floor Connecting Passage	< 1% Chrysotile
61	Ductwork Joint Caulk	Boiler Room	NAD
62	Boiler Breeching	Boiler Room	NAD
64	Caulk at Boiler Flue	Boiler Room	NAD
ATA-32 through ATA-34	Jacket over Fiberglass Pipe Insul.	Throughout	NAD
ATA-53, ATA-54	Tan 12" Floor Tile with Gray and Tan Marbling/Mastic	Room 117A	NAD
ATA-47, ATA-61, ATA-62	Bright Pink/Burgundy 12" Floor Tile/ Mastic	Stairwell Landings	NAD
ATA-46, ATA-59, ATA-60	Off-White with Gray Marbled 12" Floor Tile/Mastic	003, 005B, 006B, 107A, 108, 203, 206, 209, 210, 212, 214, 216, 216A	NAD



**DELTA Environmental Services, Inc.**

**TABLE 4-3: NON-ASBESTOS-CONTAINING MATERIAL  
GATEWAY COMMUNITY TECHNICAL COLLEGE  
NORTH HAVEN, CONNECTICUT**

HOMOGENEOUS AREA NUMBER	MATERIAL DESCRIPTION	LOCATION	ASBESTOS TYPE AND CONTENT (%)
3, 4, 50, 51, 52, 59 ATA-16, ATA-17, ATA- 40, ATA-41, ATA-63 through ATA-68	Wall and Ceiling Plaster	Maintenance Shop (Room 106), Videoconference Center (Room 207), Rooms 208, 209, 211, 213, 215, Kitchen	NAD
5, 47, 48, 49	Sheetrock Joint Compound	Videoconference Center (Room 207)	NAD
6, 7	Sheetrock	Videoconference Center (Room 207)	NAD
8, 9, 10, 56, 57, 58, ATA- 08	Glue Dot From Acoustical Tile	Room 106, Room 208, Room 213	NAD
11, 12, 13, ATA-18 through ATA-20	2' X 2' Suspended Ceiling Tile Rough Texture Gray with White Face	Various Areas Throughout Building	NAD
ATA-21 through ATA-31, ATA-38, ATA-39, ATA-74 through ATA-76	2' X 4' Suspended Ceiling Tile	Various Areas Throughout Building	NAD
36, 37, 38, ATA-69, ATA-70	1' X 1' Acoustical Wall Tile Light Gray with White Face	Second Floor Projection Booth 201B	NAD
39, 40, 41	Acoustical Board	Second Floor Projection Booth 201B	NAD
53, 54, 55, ATA-71 through ATA-73	1' X 1' Acoustical Wall Tile Gray with Off-White Face	Rooms 211, 213, 215	NAD



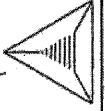
**DELTA Environmental Services, Inc.**

**TABLE 4-3: NON-ASBESTOS-CONTAINING MATERIAL  
GATEWAY COMMUNITY TECHNICAL COLLEGE  
NORTH HAVEN, CONNECTICUT**

HOMOGENEOUS AREA NUMBER	MATERIAL DESCRIPTION	LOCATION	ASBESTOS TYPE AND CONTENT (%)
ATA-13, ATA-85, ATA-86	Off-White with Black Streaks 9" Floor Tile	Room 204	NAD
ATA-45, ATA-90, ATA-91	Bright Red with White Streaks 9" Floor Tile	Cafeteria Room 117	NAD
ATA-14, ATA-55, ATA-56	Pink/Burgundy 12" Floor Tile/Mastic	Room 204 (center)	NAD
ATA-11	Solid Tan 12" Floor Tile/Mastic	Room 117A (patch), Room 201 (patch)	NAD
ATA-2, ATA-57, ATA-58	Gray 12" Floor Tile with Red Specks/Mastic	Room 120 (entry), Room 141 (under carpet)	NAD
ATA-53, ATA-54	Tan 12" Floor Tile with Gray and Tan Marbling/Mastic	Room 117A	NAD
ATA-50, ATA-83, ATA-84	Off-White 12" Floor Tile with White and Gray Streaks/Mastic	Room 106A	NAD
ATA-42, ATA-81, ATA-82	Gray 12" Stone Pattern Floor Tile/ Mastic	Room 216A, First Floor Dark Rooms	NAD
ATA-51, ATA-92, ATA-93	Brown Marble 12" Floor Tile/Mastic	Corridor Near Room 214	NAD
65, 66, 67	Spray-on Fireproofing	Gym Breezeway Above Ceiling	NAD

NOTE: NAD indicates "No Asbestos Detected"

\* Some data from reports prepared by Applied Thermodynamics Associates (ATA) dated 8/12/97 and EnviroMed Services, Inc. (EMS) dated 4/18/94.



**DELTA Environmental Services, Inc.**

## 5.0 DISCUSSION AND RECOMMENDATIONS

Gateway's North Haven campus is located at 88 Bassett Road and consists of a single three-story building constructed circa 1968. The building has 162,000± square feet of gross floor area.

The building is of concrete and steel construction and consists of classrooms, offices, an auto shop area, auditorium, library and cafeteria. The interior finishes in the building generally consist of vinyl floor tile or carpet over concrete floors, lay-in suspended tile ceilings, and concrete block/sheetrock walls.

The survey identified the following asbestos-containing materials (ACM) in the building through analytical sampling: various types of floor tile and mastic throughout the building (including older 9" and newer 12"); pipe fitting insulation throughout the building (present with fiberglass pipe insulation); window frame caulk throughout the building; door frame caulk throughout the building; boiler insulation in the boiler room; and duct insulation in two second floor mechanical rooms.

Asbestos-containing floor tile is present throughout most of the building. The tile is generally exposed (uncovered), though there are some areas where asbestos-containing tile and mastic is present below carpet and floor leveling compound. DELTA's review of documentation from a 1994 abatement project conducted in the building indicates that partial floor tile removal was conducted in some areas. Apparently, only damaged tiles were removed, and the remaining intact tile (and all asbestos-containing mastic) was left in place and covered with a thick layer of leveling compound and then carpeting.

Domestic hot and cold water and heating system piping throughout the building is insulated with fiberglass. Some of the pipe elbows are insulated with fiberglass, though there are many older type mudded fittings which were found to contain asbestos. The locations are identified in the table in Appendix A. The majority of the accessible fittings are concealed above suspended ceilings. It is expected that a large number of additional fittings are enclosed behind concrete block walls.

Interior fire door core material in the building was not sampled but is presumed to contain asbestos. This material is unlikely to release asbestos fibers unless the door is damaged in some way.

Roofing material was not sampled by DELTA. As discussed in Section 3.0, a roofing abatement project was conducted at the school in 1994, though it is possible that some asbestos-containing roofing material remains. Roofing material is generally nonfriable and unlikely to release asbestos fibers unless it is disturbed via roof patching or replacement.



Materials found not to contain asbestos included: plaster walls and ceilings present in isolated areas; sheetrock and joint compound; spray-on fireproofing above the suspended ceiling in the gym breezeway area; adhesive on vinyl baseboard moldings throughout the building; various types of ceiling tile throughout the building; window glazing compound; glue dots from ceiling tile; acoustical board; boiler breeching and boiler flue caulk.

The survey has the following limitations:

- The survey did not include sampling or evaluation of roofing materials.
- DELTA's survey included an evaluation for the presence of asbestos-containing insulation on electrical equipment in the building. The inspection included building wiring, whips and fixtures. No suspect insulation was found. The inspection was designed to cover a representative portion of the building, since it was not feasible to examine all fixtures, junction boxes, etc. Given the age of the building, the presence of asbestos in electrical systems appears unlikely.
- The survey did not utilize "destructive" sampling methods, and therefore may not have identified all of the asbestos-containing materials in the building. Specifically, the inspection did not include areas enclosed by walls, ceilings, or fixed furnishings (such as chalkboards) unless these spaces could be accessed without damage.
- The survey attempted to access and identify asbestos-containing materials associated with HVAC and mechanical systems. However, such systems were not dismantled during the inspection. It is possible that boilers, furnaces, fan units and other devices may contain gaskets and other interior asbestos material which can only be accessed through dismantling them. Care should be taken to avoid the accidental disturbance of asbestos during maintenance or repair work.

## **6.0 ESTIMATED COST FOR ASBESTOS ABATEMENT**

The estimated cost for asbestos abatement shown in Table 6-1 is provided solely for establishing removal and replacement costs for the DPW asbestos inventory database. The abatement estimate utilizes fixed unit costs for specific item descriptions. Abatement projects are to be estimated with respect to individual project requirements or conditions.

The estimated cost for abatement of the building is \$599,000. The cost estimate utilizes standard unit prices for removal of different types of asbestos-containing materials. When an actual asbestos abatement project is planned, a more precise estimate can be developed based on the specific work scope.



TABLE 6-1

**GATEWAY COMMUNITY TECHNICAL COLLEGE, NORTH HAVEN CAMPUS  
NORTH HAVEN, CT  
ASBESTOS ABATEMENT  
COST ESTIMATE**

Item Description	Quantity	Unit	Unit Cost	Subtotal Cost
<b><u>REMOVAL</u></b>				
Thermal System Insulation	1,902	SF	\$10.00	\$19,020
Thermal System Insulation		LF	\$15.00	\$0
Surfacing Material		SF	\$12.50	\$0
Miscellaneous Material	11,840	LF	\$5.00	\$59,200
Miscellaneous Material	71,305	SF	\$5.00	\$356,525
<b>SUB TOTAL REMOVAL</b>				<b>\$434,745</b>
<b><u>REPLACEMENT</u></b>				
Thermal System Insulation	1,902	SF	\$10.00	\$19,020
Thermal System Insulation		LF	\$15.00	\$0
Surfacing Material		SF	\$10.00	\$0
Miscellaneous Material		LF	N/A	
Miscellaneous Material		SF	N/A	
<b>SUB TOTAL REPLACEMENT</b>				<b>\$19,020</b>
<b>Construction</b>				<b>\$453,765</b>
<b>Consultant (20%)</b>				<b>\$90,753</b>
<b>Contingency (10%)</b>				<b>\$54,452</b>
<b>TOTAL</b>				<b>\$598,970</b>
<b>ABATEMENT ESTIMATE</b>				<b>\$599,000</b>



**DELTA Environmental Services, Inc.**



## **APPENDIX A**

### **Inventory of Identified Asbestos-Containing Material**



**DELTA Environmental Services, Inc.**

## INVENTORY OF IDENTIFIED ASBESTOS-CONTAINING MATERIALS

ROOM NUMBER	ROOM NAME	HOMOGENEOUS AREA	SUSPECT MATERIAL DESCRIPTION	ASBESTOS CONTENT (%)	FLOORING (SF)	CEILING (SF)	WALLS (SF)	PIPE INSULATION (L.F.)	PIPE FITTING INSULATION (EA)	EQUIPMENT INSULATION (SF)	MISCELLANEOUS (L.F.)	MISCELLANEOUS (SF)	COMMENTS/CONDITION
<b>BASEMENT</b>													
	OLD LOCKER ROOM AREA	14, ATA-80	PIPE FITTING INSULATION	8-15%					200				CONCEALED ABOVE PLASTER CEILING
	OLD LOCKER ROOM AREA	46	DOOR FRAME CAULK	7%							300		AT JOINT BETWEEN DOOR FRAME/BLOCK
<b>GROUND FLOOR</b>													
	CLASSROOM WING												
	EAST CORRIDOR	30, 2	GRN/RED TAN 8" FL TILE/MASTIC	3% / 9%	860								
	EAST CORRIDOR	14, ATA-80	PIPE FITTING INSULATION	8-15%					50				ABOVE SUSPENDED CEILING
	WEST CORRIDOR	30, 2	GRN/RED TAN 8" FL TILE/MASTIC	3% / 9%	1200								
	WEST CORRIDOR	14, ATA-80	PIPE FITTING INSULATION	9-15%					50				ABOVE SUSPENDED CEILING
	NORTH CORRIDOR	30, 2	GRN/RED TAN 8" FL TILE/MASTIC	3% / 8%	740								
	NORTH CORRIDOR	14, ATA-80	PIPE FITTING INSULATION	9-15%					60				
	SOUTH CORRIDOR	30, 2	GRN/RED TAN 8" FL TILE/MASTIC	3% / 8%	330								
	SOUTH CORRIDOR	14, ATA-80	PIPE FITTING INSULATION	8-15%					35				
001	OFFICE	14, ATA-80	PIPE FITTING INSULATION	8-15%					10				
001	OFFICE	23, 28	WINDOW CAULK	5-10%							50		AT JOINT BETWEEN DOOR FRAME/BLOCK
001	OFFICE	46	DOOR FRAME CAULK	7%							70		ABOVE SUSPENDED CEILING AND DUCTS
001A	CLUSTODIAN	14, ATA-80	PIPE FITTING INSULATION	9-15%					6				AT JOINT BETWEEN DOOR FRAME/BLOCK
001A	CLUSTODIAN	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
001B	MEN FACILITY	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
	MEN'S ROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
002	STORAGE	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
	WOMEN'S ROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
003	CLASSROOM	23, 28	WINDOW CAULK	8-10%							50		AT JOINT BETWEEN DOOR FRAME/BLOCK
003	CLASSROOM	46	DOOR FRAME CAULK	7%							70		AT JOINT BETWEEN DOOR FRAME/BLOCK
004	OFFICE	23, 28	WINDOW CAULK	5-10%							25		AT JOINT BETWEEN DOOR FRAME/BLOCK
004	OFFICE	46	DOOR FRAME CAULK	7%							70		AT JOINT BETWEEN DOOR FRAME/BLOCK
005	OFFICE	14, ATA-80	PIPE FITTING INSULATION	8-15%					6				
005	OFFICE	23, 28	WINDOW CAULK	5-10%							25		AT JOINT BETWEEN DOOR FRAME/BLOCK
005	OFFICE	46	DOOR FRAME CAULK	7%							70		AT JOINT BETWEEN DOOR FRAME/BLOCK
005A	STORAGE	46	DOOR FRAME CAULK	7%							70		AT JOINT BETWEEN DOOR FRAME/BLOCK
005B	OFFICE	ATA-8, EMS-22	L.T. GREEN 8" FLOOR TILE/MASTIC	2% / 8%									AT JOINT BETWEEN DOOR FRAME/BLOCK
005B	OFFICE	14, ATA-80	PIPE FITTING INSULATION	9-15%					12				TILE IS BELOW CARPET
006	OFFICE	46	DOOR FRAME CAULK	7%	130						70		AT JOINT BETWEEN DOOR FRAME/BLOCK
006	OFFICE	ATA-8, EMS-22	L.T. GREEN 8" FLOOR TILE/MASTIC	2% / 8%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
006	OFFICE	46	DOOR FRAME CAULK	7%							70		AT JOINT BETWEEN DOOR FRAME/BLOCK
007	OFFICE	ATA-8, EMS-22	L.T. GREEN 8" FLOOR TILE/MASTIC	2% / 8%	780								FITTINGS UP 20 FEET FROM FLOOR
007	OFFICE	46	DOOR FRAME CAULK	7%							50		AT JOINT BETWEEN DOOR FRAME/BLOCK
007A	EQUIPMENT STORAGE	14, ATA-80	PIPE FITTING INSULATION	9-15%					10				AT JOINT BETWEEN DOOR FRAME/BLOCK
007A	EQUIPMENT STORAGE	46	DOOR FRAME CAULK	7%							70		AT JOINT BETWEEN DOOR FRAME/BLOCK
008	CLASSROOM	30, 2	TAN 8" FLOOR TILE/MASTIC	3% / 8%	940								
008	CLASSROOM	14, ATA-80	PIPE FITTING INSULATION	8-15%					20				AT JOINT BETWEEN DOOR FRAME/BLOCK
008	CLASSROOM	46	DOOR FRAME CAULK	7%							70		AT JOINT BETWEEN DOOR FRAME/BLOCK

GATEWAY COMMUNITY TECHNICAL COLLEGE  
NORTH HAVEN CAMPUS  
NORTH HAVEN, CT  
INVENTORY OF IDENTIFIED ASBESTOS-CONTAINING MATERIALS

4/23/02

ROOM NUMBER	ROOM NAME	HOMOGENEOUS AREA	SUSPECT MATERIAL DESCRIPTION	ASBESTOS CONTENT (%)	FLOORING (SF)	CEILING (SF)	WALLS (SF)	PIPE INSULATION (L.F.)	PIPE FITTING INSULATION (EA)	EQUIPMENT INSULATION (SF)	MISCELLANEOUS (L.F.)	MISCELLANEOUS (SF)	COMMENTS/CONDITION
GROUND FLOOR													
	CLASSROOM WING												
000	OFFICE	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
	NORTH ELEVATOR	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
	NORTH ELEV. MECH.	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
010	CLASSROOM/LAB	30, 2	TAN 8" FLOOR TILE/MASTIC	3% / 9%	1040								
010	CLASSROOM/LAB	23, 28	WINDOW CAULK	5-10%									
010	CLASSROOM/LAB	46	DOOR FRAME CAULK	7%							25		
011	TOYOTA LAB	14, ATA-80	PIPE FITTING INSULATION	9-15%					5		70		AT JOINT BETWEEN DOOR FRAME/BLOCK
011	TOYOTA LAB	ATA-5, EMS-46	L.T. GRAY 8" FLOOR TILE/MASTIC	2% / 6%	1080								
011	TOYOTA LAB	23, 28	WINDOW CAULK	5-10%									
011A	ELECTRICAL ROOM	46	DOOR FRAME CAULK	7%							90		AT JOINT BETWEEN DOOR FRAME/BLOCK
012	GM LAB	ATA-5, EMS-46	DOOR FRAME CAULK	7%							70		AT JOINT BETWEEN DOOR FRAME/BLOCK
012	GM LAB	23, 28	L.T. GRAY 8" FLOOR TILE/MASTIC	2% / 6%	1080						35		AT JOINT BETWEEN DOOR FRAME/BLOCK
012	GM LAB	46	WINDOW CAULK	5-10%							50		
012	GM LAB		DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
GROUND FLOOR													
	AUTO SHOP WING												
	CONNECTING PASSAGE	23, 28	WINDOW CAULK	5-10%									
	VESTIBULE TO AUTO SHOPS	14, ATA-80	PIPE FITTING INSULATION	9-15%					8		80		
	SOUTH ELEVATOR												
	SOUTH ELEV. MECH.												
	BOILER ROOM	63	BOILER INSULATION	20%						750			UNDER JACKETS OF THREE BOILERS
	BOILER ROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
	ELECTRICAL ROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
	MEN'S ROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
	WOMEN'S ROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
013	AUTO LAB	46	DOOR FRAME CAULK	7%							200		AT JOINT BETWEEN DOOR FRAME/BLOCK
014	AUTO LAB	46	DOOR FRAME CAULK	7%							200		AT JOINT BETWEEN DOOR FRAME/BLOCK
014B	AUTO SHOP OFFICE	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
	WELDING SHOP	14, ATA-80	PIPE FITTING INSULATION	9-15%					12				AT JOINT BETWEEN DOOR FRAME/BLOCK
	WELDING SHOP	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
FIRST FLOOR													
	ADMIN. OFFICE WING												
	MAIN LOBBY	23, 28	WINDOW CAULK	5-10%							100		AT FRONT WINDOW/DOOR ASSEMBLY
100	BUSINESS AND INDUSTRY												
101	RECORDS OFFICE												
	PHONE CLOSET	14, ATA-80	PIPE FITTING INSULATION	9-15%					8				

GATEWAY COMMUNITY TECHNICAL COLLEGE  
NORTH HAVEN CAMPUS  
NORTH HAVEN, CT  
INVENTORY OF IDENTIFIED ASBESTOS-CONTAINING MATERIALS

ROOM NUMBER	ROOM NAME	HOMOGENEOUS AREA	SUSPECT MATERIAL DESCRIPTION	ASBESTOS CONTENT (%)	FLOORING (SF)	CEILING (SF)	WALLS (SF)	PIPE INSULATION (LF)	PIPE FITTINGS INSULATION (EA)	EQUIPMENT INSULATION (SF)	MISCELLANEOUS (LF)	MISCELLANEOUS (SF)	COMMENTS/CONDITION
<b>FIRST FLOOR</b>													
	ADMIN. OFFICE WING												
102A	HEALTH OFFICE												
102B	DEAN'S OFFICE												
102C	BUSINESS AND INDUSTRY												
102D	BUSINESS AND INDUSTRY												
	MEN'S RESTROOM												
	WOMEN'S RESTROOM												
103	CAMPUS OFFICE												
103A	CAMPUS OFFICE												
103B	OFFICE												
103C	OFFICE												
103D	OFFICE												
103E	OFFICE												
103F	OFFICE												
103G	OFFICE												
	ADMIN. AREA CORRIDOR	14, ATA-80	PIPE FITTING INSULATION	9-15%					2				
<b>FIRST FLOOR</b>													
	AUDITORIUM WING												
	NORTH CORRIDOR	30, 2	GRN RED/TAN 8" FL TILE/MASTIC	3% / 9%	1330								
	NORTH CORRIDOR	14, ATA-80	PIPE FITTING INSULATION	9-15%					25				
	NORTH CORRIDOR	48	DOOR FRAME CAULK	7%							50		EAST SIDE DOUBLE DOORS
	WEST CORRIDOR	30, 2	GRN RED/TAN 8" FL TILE/MASTIC	3% / 9%	480								
	SOUTH CORRIDOR	30, 2	GRN RED/TAN 8" FL TILE/MASTIC	3% / 9%	1330								
	SOUTH CORRIDOR	14, ATA-80	PIPE FITTING INSULATION	9-15%					40				
	SOUTH CORRIDOR	48	DOOR FRAME CAULK	7%							50		EAST SIDE DOUBLE DOORS
104	EAST CORRIDOR	14, ATA-80	PIPE FITTING INSULATION	9-15%					50				
104	AUDITORIUM	14, ATA-80	PIPE FITTING INSULATION	9-15%					8				8 SMALL FITTINGS ALONG STAGE BACK WALL
105	AUDITORIUM	48	DOOR FRAME CAULK	7%							300		AT JOINT BETWEEN DOOR FRAMEBLOCK
105	CLASSROOM	30, 2	TAN 8" FLOOR TILE/MASTIC	3% / 9%	1500						50		
105	CLASSROOM	23, 28	WINDOW CAULK	5-10%							35		
105	CLASSROOM	48	DOOR FRAME CAULK	7%									AT JOINT BETWEEN DOOR FRAMEBLOCK
106	MAINTENANCE	30, 2	TAN 8" FLOOR TILE/MASTIC	3% / 9%	80						50		AT FRONT PORTION OF CORRIDOR
106	MAINTENANCE	48	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAMEBLOCK
106A	MAINT. OFFICE	48	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAMEBLOCK
106B	BATHROOM	48	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAMEBLOCK
106C	CUSTODIAN CLOSET	48	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAMEBLOCK
106D	STORAGE	30, 2	TAN 8" FLOOR TILE/MASTIC	3% / 9%	80								
106D	STORAGE	48	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAMEBLOCK

GATEWAY COMMUNITY TECHNICAL COLLEGE  
NORTH HAVEN CAMPUS  
NORTH HAVEN, CT  
INVENTORY OF IDENTIFIED ASBESTOS-CONTAINING MATERIALS

4/23/02

ROOM NUMBER	ROOM NAME	HOMOGENEOUS AREA	SUSPECT MATERIAL DESCRIPTION	ASBESTOS CONTENT (%)	FLOORING (SF)	CEILING (SF)	WALLS (SF)	PIPE INSULATION (LF)	PIPE FITTING INSULATION (SF)	EQUIPMENT INSULATION (SF)	MISCELLANEOUS (SF)	MISCELLANEOUS (SF)	COMMENTS/CONDITION
<b>FIRST FLOOR</b>													
	<b>AUDITORIUM WING</b>												
107	CLASSROOM	30, 2	TAN 8" FLOOR TILE/MASTIC	3% / 6%	1500								
107	CLASSROOM	23, 28	WINDOW CAULK	5-10%								25	
107	CLASSROOM	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
107A	OFFICE	23, 28	WINDOW CAULK	5-10%								15	
107A	OFFICE	14, ATA-40	PIPE FITTING INSULATION	9-15%				20					AT JOINT BETWEEN DOOR FRAME/BLOCK
107A	OFFICE	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
107B	OFFICE	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
107C	OFFICE	30, 2	TAN 8" FLOOR TILE/MASTIC	3% / 6%	170								
107C	OFFICE	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
108	OFFICE	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
109	OFFICE	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
110	DARRROOMS	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
110	CLASSROOM	30, 2	TAN 8" FLOOR TILE/MASTIC	3% / 6%	1290								
110	CLASSROOM	23, 28	WINDOW CAULK	5-10%								50	
110	CLASSROOM	14, ATA-40	PIPE FITTING INSULATION	9-15%				5					AT JOINT BETWEEN DOOR FRAME/BLOCK
110	CLASSROOM	46	DOOR FRAME CAULK	7%								35	DARK GRAY TILES AT NW CORNER
111	GRAPHICS CLASSROOM	ATA-5, EMS-22	L.T. GREEN 8" FLOOR TILE/MASTIC	2% / 6%	1430								
111	GRAPHICS CLASSROOM	23, 28	WINDOW CAULK	5-10%					30			25	
111	GRAPHICS CLASSROOM	14, ATA-40	PIPE FITTING INSULATION	9-15%									
111	GRAPHICS CLASSROOM	46	DOOR FRAME CAULK	7%								120	AT JOINT BETWEEN DOOR FRAME/BLOCK
112A	STORAGE	ATA-6, EMS-22	L.T. GREEN 8" FLOOR TILE/MASTIC	2% / 6%	200								
112A	STORAGE	46	DOOR FRAME CAULK	7%								50	AT JOINT BETWEEN DOOR FRAME/BLOCK
112	OFFICE	ATA-6, EMS-22	L.T. GREEN 8" FLOOR TILE/MASTIC	2% / 6%	200								
112	OFFICE	23, 28	WINDOW CAULK	5-10%								25	
112	OFFICE	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
113	CONFERENCE ROOM	17	8" FLOOR TILE MASTIC	5%	2450								SUSP. MASTIC BELOW LEVEL/ELASTIC/CARPET
113	CONFERENCE ROOM	23, 28	WINDOW CAULK	5-10%								120	
113	CONFERENCE ROOM	46	DOOR FRAME CAULK	7%								50	AT JOINT BETWEEN DOOR FRAME/BLOCK
113A	CONFERENCE ROOM	46	DOOR FRAME CAULK	7%					70			35	AT JOINT BETWEEN DOOR FRAME/BLOCK
	KITCHEN	14, ATA-40	PIPE FITTING INSULATION	9-15%									
	KITCHEN	46	DOOR FRAME CAULK	7%								200	AT JOINT BETWEEN DOOR FRAME/BLOCK
115	OFFICE	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
115A	OFFICE	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
116	OFFICE	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
117	CAFETERIA	30, 2	RED/TAN 8" FL. TILE/MASTIC	3% / 6%	2130								AT JOINT BETWEEN DOOR FRAME/BLOCK
117	CAFETERIA	23, 28	WINDOW CAULK	5-10%								120	
117	CAFETERIA	14, ATA-40	PIPE FITTING INSULATION	9-15%				60					
117	CAFETERIA	46	DOOR FRAME CAULK	7%								85	AT JOINT BETWEEN DOOR FRAME/BLOCK
117A	STAFF LOUNGE	23, 28	WINDOW CAULK	5-10%								25	
117A	STAFF LOUNGE	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK

# INVENTORY OF IDENTIFIED ASBESTOS-CONTAINING MATERIALS

ROOM NUMBER	ROOM NAME	HOMOGENEOUS AREA	SUSPECT MATERIAL DESCRIPTION	ASBESTOS CONTENT (%)	FLOORING (SF)	CEILING (SF)	WALLS (SF)	PIPE INSULATION (LF)	PIPE FITTING INSULATION (EA)	EQUIPMENT INSULATION (SF)	MISCELLANEOUS (LF)	MISCELLANEOUS (SF)	COMMENTS/CONDITION
FIRST FLOOR													
	LABORATORY WING												
	EAST CORRIDOR	30, 2	GRN/PEDTAN 8" PL. TILE/MASTIC	3% / 8%	1880								
	EAST CORRIDOR	14, ATA-80	PIPE FITTING INSULATION	8-16%					20				
	EAST CORRIDOR	48	DOOR FRAME CAULK	7%									
	WEST CORRIDOR	30, 2	GRN/PEDTAN 8" PL. TILE/MASTIC	3% / 8%	1860						60		DOUBLE DOORS AT NORTH END
	WEST CORRIDOR	14, ATA-80	PIPE FITTING INSULATION	9-15%					70				
	WEST CORRIDOR	48	DOOR FRAME CAULK	7%									
120	COMPUTER ROOM	17	8" FLOOR TILE MASTIC	5%	120						60		DOUBLE DOORS AT NORTH END
120	COMPUTER ROOM	48	DOOR FRAME CAULK	7%									SUSP. MASTIC BELOW LEVEL/ASTIC/CARPET
121	COMPUTER ROOM	ATA-5, EMS-46	L.T. GRAY 8" FLOOR TILE/MASTIC	2% / 8%	740						35		AT JOINT BETWEEN DOOR FRAME/BLOCK
121	COMPUTER ROOM	23, 28	WINDOW CAULK	5-10%							25		
121	COMPUTER ROOM	48	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
FIRST FLOOR													
	LABORATORY WING												
122	LAB	30, 2	TAN 8" FLOOR TILE/MASTIC	2% / 8%	740								
122	LAB	23, 28	WINDOW CAULK	5-10%									
122	LAB	48	DOOR FRAME CAULK	7%							50		
123	FACILITY SUPPORT OFFICE	ATA-5, EMS-46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
123	OFFICE	46	L.T. GRAY 8" FLOOR TILE/MASTIC	2% / 8%	200						35		AT JOINT BETWEEN DOOR FRAME/BLOCK
124	STORAGE	ATA-5, EMS-46	DOOR FRAME CAULK	7%							35		TILE IS UNDER CARPET
124	STORAGE	46	L.T. GRAY 8" FLOOR TILE/MASTIC	2% / 8%	245								AT JOINT BETWEEN DOOR FRAME/BLOCK
125	LAB	ATA-5, EMS-22	L.T. GREEN 9" FLOOR TILE/MASTIC	2% / 8%	740						35		AT JOINT BETWEEN DOOR FRAME/BLOCK
125	LAB	23, 28	WINDOW CAULK	5-10%							25		
125	LAB	14, ATA-80	PIPE FITTING INSULATION	9-15%					10				
125	LAB	48	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
126	LAB	ATA-5, EMS-46	L.T. GRAY 8" FLOOR TILE/MASTIC	2% / 8%	215								AT JOINT BETWEEN DOOR FRAME/BLOCK
126	LAB	48	DOOR FRAME CAULK	7%							35		TILE IS UNDER CARPET
127	LAB	ATA-5, EMS-48	L.T. GRAY 8" FLOOR TILE/MASTIC	2% / 8%	740						35		AT JOINT BETWEEN DOOR FRAME/BLOCK
127	LAB	23, 28	WINDOW CAULK	5-10%							25		
127	LAB	48	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
128	LAB	ATA-5, EMS-46	L.T. GRAY 8" FLOOR TILE/MASTIC	2% / 8%	740								
128	LAB	23, 28	WINDOW CAULK	5-10%							25		
128	LAB	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
128A	STORAGE	30, 2	TAN 8" FLOOR TILE/MASTIC	3% / 8%	100								
128A	STORAGE	46	DOOR FRAME CAULK	7%									
128B	STORAGE	48	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
128B	WOMEN'S RESTROOM	48	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
128B	WOMEN'S FACILITY	46	DOOR FRAME CAULK	7%							36		AT JOINT BETWEEN DOOR FRAME/BLOCK
128B	MEN'S RESTROOM	48	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK



## INVENTORY OF IDENTIFIED ASBESTOS-CONTAINING MATERIALS

ROOM NUMBER	ROOM NAME	HOMOGENEOUS AREA	SUSPECT MATERIAL DESCRIPTION	ASBESTOS CONTENT (%)	FLOORING (SF)	Ceiling (SF)	Walls (SF)	PIPE INSULATION (LF)	PIPE FITTINGS INSULATION (EA)	EQUIPMENT INSULATION (SF)	MISCELLANEOUS (LF)	MISCELLANEOUS (SF)	COMMENTS/CONDITION
<b>FIRST FLOOR</b>													
	<b>LABORATORY WING</b>												
	MEN FACULTY	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
	MEN HANDICAPPED	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
	WOMEN HANDICAPPED	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
129	OFFICE	30, 2	TAN 8" FLOOR TILE/MASTIC	3% / 5%	740								TILE IS UNDER CARPET 7777
129	OFFICE	23, 28	WINDOW CAULK	5-10%							25		
129	OFFICE	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
130	COMPUTER ROOM	17	8" FLOOR TILE MASTIC	5%	435								SUSP. MASTIC BELOW LEVELASTIC/CARPET
130	COMPUTER ROOM	23, 28	WINDOW CAULK	5-10%							25		
131	COMPUTER ROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
131	STUDENT LOUNGE	17	8" FLOOR TILE MASTIC	5%	700								SUSP. MASTIC BELOW LEVELASTIC/CARPET
131	STUDENT LOUNGE	23, 28	WINDOW CAULK	5-10%							50		
131	STUDENT LOUNGE	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
131A	STUDENT GOVERNMENT	17	8" FLOOR TILE MASTIC	5%	450								SUSP. MASTIC BELOW LEVELASTIC/CARPET
131A	STUDENT GOVERNMENT	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
	PASSAGE TO ROOM 122	46	DOOR FRAME CAULK	7%							120		AT JOINT BETWEEN DOOR FRAME/BLOCK
132	STUDENT ACTIVITIES	46	DOOR FRAME CAULK	7%							250		AT JOINT BETWEEN DOOR FRAME/BLOCK
<b>FIRST FLOOR</b>													
	<b>LABORATORY WING</b>												
123	CLASSROOM	17	8" FLOOR TILE MASTIC	5%	740								SUSP. MASTIC BELOW LEVELASTIC/CARPET
133	CLASSROOM	23, 28	WINDOW CAULK	5-10%							25		
133	CLASSROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
134	CLASSROOM	23, 28	WINDOW CAULK	5-10%							50		
134	CLASSROOM	17	OLD FLOOR TILE MASTIC	5%	740								LEVELASTIC OVER MASTIC
134	CLASSROOM	14, ATA-80	PIPE FITTING INSULATION	8-15%					10				
134	CLASSROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
134A	CUSTODIAN	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
134A	CUSTODIAN	14, ATA-80	PIPE FITTING INSULATION	8-15%					1				ON WASTE RISER
135	CLASSROOM	17	8" FLOOR TILE MASTIC	5%	740								SUSP. MASTIC BELOW LEVELASTIC/CARPET
135	CLASSROOM	23, 28	WINDOW CAULK	5-10%							25		
135	CLASSROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
136	CLASSROOM	ATA-4, EMS-22	L.T. GREEN 8" FLOOR TILE/MASTIC	2% / 6%	740								
136	CLASSROOM	23, 28	WINDOW CAULK	5-10%							25		
136	CLASSROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
137	LAB	17	8" FLOOR TILE MASTIC	5%	740								SUSP. MASTIC BELOW LEVELASTIC/CARPET
137	LAB	23, 28	WINDOW CAULK	5-10%							25		
137	LAB	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
138	OFFICE	17	8" FLOOR TILE MASTIC	5%	740								SUSP. MASTIC BELOW LEVELASTIC/CARPET
138	OFFICE	23, 28	WINDOW CAULK	5-10%							25		
138	OFFICE	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
138	OFFICE	17	8" FLOOR TILE MASTIC	5%	370								SUSP. MASTIC BELOW LEVELASTIC/CARPET

## INVENTORY OF IDENTIFIED ASBESTOS-CONTAINING MATERIALS

ROOM NUMBER	ROOM NAME	HOMOGENEOUS AREA	SUSPECT MATERIAL DESCRIPTION	ASBESTOS CONTENT (%)	FLOORING (SF)	CEILING (SF)	WALLS (SF)	PIPE INSULATION (LF)	PIPE FITTING INSULATION (EA)	EQUIPMENT INSULATION (SF)	MISCELLANEOUS (LF)	MISCELLANEOUS (SF)	COMMENTS/CONDITION
<b>FIRST FLOOR</b>													
	LABORATORY WING												
139	OFFICE	46	DOOR FRAME CAULK	7%									
139A	PRESIDENT'S OFFICE	17	9" FLOOR TILE MASTIC	5%	370						35		AT JOINT BETWEEN DOOR FRAME/BLOCK
139A	PRESIDENT'S OFFICE	23, 28	WINDOW CAULK	5-10%							50		SUSP. MASTIC BELOW LEVELASTIC/CARPET
139A	PRESIDENT'S OFFICE	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
140	BOOKSTORE	17	9" FLOOR TILE MASTIC	5%	740						25		SUSP. MASTIC BELOW LEVELASTIC/CARPET
140	BOOKSTORE	23, 28	WINDOW CAULK	5-10%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
141	COMPUTER ROOM	17	9" FLOOR TILE MASTIC	5%	120						35		SUSP. MASTIC BELOW LEVELASTIC/CARPET
141	COMPUTER ROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
<b>SECOND FLOOR</b>													
	LIBRARY WING												
	VESTIBULE	EMS-18/22	GREEN 9" FLOOR TILEMASTIC	2% / 8%	750								
	CONNECTING PASSAGE	32, 35	BROWN 12" FLOOR TILEMASTIC	< 1% / 10%	710								
	CONNECTING PASSAGE	23, 28	WINDOW CAULK	5-10%					6		200		
	CONNECTING PASSAGE	14, ATA-50	PIPE FITTING INSULATION	9-15%									
200	LIBRARY	23, 28	WINDOW CAULK	5-10%							200		
200	LIBRARY	46	DOOR FRAME CAULK	7%							100		AT JOINT BETWEEN DOOR FRAME/BLOCK
200A	LIBRARY OFFICE	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
200B	LIBRARY OFFICE	46	DOOR FRAME CAULK	7%							100		AT JOINT BETWEEN DOOR FRAME/BLOCK
200C	LIBRARY OFFICE	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
200D	LIBRARY OFFICE	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
<b>SECOND FLOOR</b>													
	LAB WING												
	EAST CORRIDOR	42, 45	TAN 12" FLOOR TILEMASTIC	7% / 13%	1030								
	EAST CORRIDOR	23, 28	WINDOW CAULK	5-10%							50		
	EAST CORRIDOR	14, ATA-80	PIPE FITTING INSULATION	9-15%					16				
	WEST CORRIDOR	42, 45	TAN 12" FLOOR TILEMASTIC	7% / 13%	1030								
	WEST CORRIDOR	14, ATA-80	PIPE FITTING INSULATION	9-15%					20				
	NORTH CORRIDOR	42, 45	TAN 12" FLOOR TILEMASTIC	7% / 13%	1180								
	SOUTH CORRIDOR	42, 45	TAN 12" FLOOR TILEMASTIC	7% / 13%	1180								
201	CLASSROOM	23, 28	WINDOW CAULK	5-10%							60		
201	CLASSROOM	42, 45	TAN 12" FLOOR TILEMASTIC	7% / 13%	1220								
201	CLASSROOM	46	DOOR FRAME CAULK	7%							70		AT JOINT BETWEEN DOOR FRAME/BLOCK
201A	STORAGE	30, 2	TAN 9" FLOOR TILEMASTIC	3% / 9%	170								
201A	STORAGE	14, ATA-80	PIPE FITTING INSULATION	9-15%					8				FITTINGS ON DOMESTIC WATER LINES
201A	STORAGE	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK



GATEWAY COMMUNITY TECHNICAL COLLEGE  
NORTH HAVEN CAMPUS  
NORTH HAVEN, CT  
INVENTORY OF IDENTIFIED ASBESTOS-CONTAINING MATERIALS

4/23/02

ROOM NUMBER	ROOM NAME	HOMOGENEOUS AREA	SUSPECT MATERIAL DESCRIPTION	ASBESTOS CONTENT (%)	FLOORING (SF)	CEILING (SF)	WALLS (SF)	PIPE INSULATION (L.P.)	PIPE FITTING INSULATION (EA)	EQUIPMENT INSULATION (SF)	MISCELLANEOUS (L.P.)	MISCELLANEOUS (SF)	COMMENTS/CONDITION
SECOND FLOOR													
	LAB WING												
201B	PROJECTION BOOTH	42, 45	TAN 12" FLOOR TILE/MASTIC	7% / 13%	110								
201B	PROJECTION BOOTH	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
201C	STORAGE	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
	WOMEN'S RESTROOM	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
	MEN'S RESTROOM	49	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
202	OFFICE	17	9" FLOOR TILE MASTIC	5%	1280								SUBP. MASTIC BELOW LEVEL TO CARPET
202	OFFICE	23, 28	WINDOW CAULK	5-10%								70	AT JOINT BETWEEN DOOR FRAME/BLOCK
202	OFFICE	46	DOOR FRAME CAULK	7%								70	AT JOINT BETWEEN DOOR FRAME/BLOCK
203	LAB	23, 28	WINDOW CAULK	5-10%								70	AT JOINT BETWEEN DOOR FRAME/BLOCK
203	LAB	46	DOOR FRAME CAULK	7%								70	AT JOINT BETWEEN DOOR FRAME/BLOCK
204	LAB	23, 28	WINDOW CAULK	5-10%								70	AT JOINT BETWEEN DOOR FRAME/BLOCK
204	LAB	ATA-6, EMS-22	LT. GREEN 9" FLOOR TILE/MASTIC	2% / 6%	1220								
205	LAB	42, 45	TAN 12" FLOOR TILE/MASTIC	7% / 13%	1220							70	AT JOINT BETWEEN DOOR FRAME/BLOCK
205	LAB	23, 28	WINDOW CAULK	5-10%								25	
205	LAB	46	DOOR FRAME CAULK	7%								70	AT JOINT BETWEEN DOOR FRAME/BLOCK
206	LAB	23, 28	WINDOW CAULK	5-10%								59	
206	LAB	46	DOOR FRAME CAULK	7%								45	AT JOINT BETWEEN DOOR FRAME/BLOCK
207	VIDEOCONFERENCE CTR	23, 28	WINDOW CAULK	5-10%								50	AT JOINT BETWEEN DOOR FRAME/BLOCK
207	VIDEOCONFERENCE CTR	46	DOOR FRAME CAULK	7%								105	AT JOINT BETWEEN DOOR FRAME/BLOCK
207A	OFFICE	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
208	OFFICE	30, 2	TAN 9" FLOOR TILE/MASTIC	3% / 9%	500								
208	OFFICE	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
208C	OFFICE	30, 2	TAN 9" FLOOR TILE/MASTIC	3% / 9%	100								
208C	OFFICE	23, 28	WINDOW CAULK	5-10%								15	
208C	OFFICE	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
208D	OFFICE	30, 2	TAN 9" FLOOR TILE/MASTIC	3% / 9%	100								
208D	OFFICE	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
209	LAB	23, 28	WINDOW CAULK	5-10%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
209	LAB	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
210	LAB	23, 28	WINDOW CAULK	5-10%								25	
210	LAB	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
211	OFFICE	42, 45	TAN 12" FLOOR TILE/MASTIC	7% / 13%	700								
211	OFFICE	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
	STORAGE NEAR 211	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK
	STORAGE NEAR 211	46	DOOR FRAME CAULK	7%								35	AT JOINT BETWEEN DOOR FRAME/BLOCK

## INVENTORY OF IDENTIFIED ASBESTOS-CONTAINING MATERIALS

ROOM NUMBER	ROOM NAME	HOMOGENEOUS AREA	SUSPECT MATERIAL DESCRIPTION	ASBESTOS CONTENT (%)	FLOORING (SF)	CEILING (SF)	WALLS (SF)	PIPE INSULATION (LF)	PIPE FITTING INSULATION (EA)	EQUIPMENT INSULATION (SF)	MISCELLANEOUS (LF)	MISCELLANEOUS (BF)	COMMENTS/CONDITION
SECOND FLOOR													
	LAB WING												
	MECHANICAL ROOM 1	ATA-12	DUCT INSULATION	40%						100			ROOM NEAR NW CORNER OF AUDITORIUM
	MECHANICAL ROOM 1	40	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
	MECHANICAL ROOM 2	ATA-12	DUCT INSULATION	40%						100			ROOM NEAR SW CORNER OF AUDITORIUM
	MECHANICAL ROOM 2	40	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
212	OFFICE	23, 25	WINDOW CAULK	5-10%							50		
212	OFFICE	40	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
213	OFFICE	42, 45	TAN 12" FLOOR TILE/MASTIC	7% / 13%	700								
213	OFFICE	40	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
214	LAB	23, 28	WINDOW CAULK	5-10%							25		
214	LAB	40	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
215	LAB	42, 45	TAN 12" FLOOR TILE/MASTIC	7% / 13%	580								
215	LAB	40	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
216	LAB	23, 28	WINDOW CAULK	5-10%							25		
216	LAB	40	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
216A	STORAGE	40	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
	CLASSROOM WING												
	EAST CORRIDOR	30, 2	GRN/RED/TAN 8" FL. TILE/MASTIC	3% / 6%	2500								
	WEST CORRIDOR	30, 2	GRN/RED/TAN 8" FL. TILE/MASTIC	3% / 6%	2500								
220	CLASSROOM	ATA-5, EMS-22	LT. GREEN 8" FLOOR TILE/MASTIC	2% / 6%	740								
220	CLASSROOM	23, 28	WINDOW CAULK	5-10%							25		
220	CLASSROOM	40	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
221	CLASSROOM	ATA-5, EMS-22	LT. GREEN 8" FLOOR TILE/MASTIC	2% / 6%	740								
221	CLASSROOM	23, 28	WINDOW CAULK	5-10%							50		
221	CLASSROOM	40	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
221A		ATA-5, EMS-40	LT. GRAY 8" FLOOR TILE/MASTIC	2% / 6%	170								
221A		40	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
222	CLASSROOM	30, 2	TAN 8" FLOOR TILE/MASTIC	3% / 6%	740								
222	CLASSROOM	23, 28	WINDOW CAULK	5-10%							25		
222	CLASSROOM	40	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
222A		30, 2	TAN 8" FLOOR TILE/MASTIC	3% / 6%	215								
222A		40	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
223	CLASSROOM	30, 2	TAN 8" FLOOR TILE/MASTIC	3% / 6%	740								
223	CLASSROOM	23, 28	WINDOW CAULK	5-10%							25		
223	CLASSROOM	40	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
224	CLASSROOM	ATA-5, EMS-40	LT. GRAY 8" FLOOR TILE/MASTIC	2% / 6%	740								
224	CLASSROOM	23, 28	WINDOW CAULK	5-10%							25		
224	CLASSROOM	40	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK

GATEWAY COMMUNITY TECHNICAL COLLEGE  
NORTH HAVEN CAMPUS  
NORTH HAVEN, CT  
INVENTORY OF IDENTIFIED ASBESTOS-CONTAINING MATERIALS

4/23/02

ROOM NUMBER	ROOM NAME	HOMOGENEOUS AREA	SUSPECT MATERIAL DESCRIPTION	ASBESTOS CONTENT (%)	FLOORING (SF)	CEILING (SF)	WALLS (SF)	PIPE INSULATION (LF)	PIPE FITTING INSULATION (SF)	EQUIPMENT INSULATION (SF)	MISCELLANEOUS (LF)	MISCELLANEOUS (SF)	COMMENTS/CONDITION
SECOND FLOOR													
	CLASSROOM WING												
225	CLASSROOM	ATA-6, EMS-22	LT. GREEN 8' FLOOR TILE/MASTIC	2% / 6%	740								
226	CLASSROOM	23, 26	WINDOW CAULK	5-10%									
225	CLASSROOM	46	DOOR FRAME CAULK	7%							25		
228	CLASSROOM	ATA-5, EMS-48	LT. GRAY 8' FLOOR TILE/MASTIC	2% / 6%	740						35		AT JOINT BETWEEN DOOR FRAME/BLOCK
228	CLASSROOM	23, 26	WINDOW CAULK	5-10%							50		
228	CLASSROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
227	CLASSROOM	ATA-6, EMS-22	LT. GREEN 8' FLOOR TILE/MASTIC	2% / 6%	740								
227	CLASSROOM	23, 26	WINDOW CAULK	5-10%							25		
227	CLASSROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
228	CLASSROOM	ATA-6, EMS-22	LT. GREEN 8' FLOOR TILE/MASTIC	2% / 6%	740								
228	CLASSROOM	23, 26	WINDOW CAULK	5-10%							25		
228	CLASSROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
229	CLASSROOM	30, 2	TAN 8' FLOOR TILE/MASTIC	3% / 6%	740								
229	CLASSROOM	23, 26	WINDOW CAULK	5-10%							50		
229	CLASSROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
230	CLASSROOM	30, 2	TAN 8' FLOOR TILE/MASTIC	3% / 6%	740								
230	CLASSROOM	23, 26	WINDOW CAULK	5-10%							25		
230	CLASSROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
231	CLASSROOM	ATA-5, EMS-48	LT. GRAY 8' FLOOR TILE/MASTIC	2% / 6%	740								
231	CLASSROOM	23, 26	WINDOW CAULK	5-10%							25		
231	CLASSROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
232	CLASSROOM	ATA-5, EMS-48	LT. GRAY 8' FLOOR TILE/MASTIC	2% / 6%	740								
232	CLASSROOM	23, 26	WINDOW CAULK	5-10%							25		
232	CLASSROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
233	CLASSROOM	ATA-6, EMS-22	LT. GREEN 8' FLOOR TILE/MASTIC	2% / 6%	740								
233	CLASSROOM	23, 26	WINDOW CAULK	5-10%							25		
233	CLASSROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
233A		30, 2	TAN 8' FLOOR TILE/MASTIC	3% / 6%	245								
233A		46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
234	CLASSROOM	ATA-6, EMS-22	LT. GREEN 8' FLOOR TILE/MASTIC	2% / 6%	740								
234	CLASSROOM	23, 26	WINDOW CAULK	5-10%							25		
234	CLASSROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
234A		EMS-19/22	GREEN 8' FLOOR TILE/MASTIC	2% / 6%	170								
234A		46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
235	CLASSROOM	30, 2	TAN 8' FLOOR TILE/MASTIC	3% / 6%	740								
235	CLASSROOM	23, 26	WINDOW CAULK	5-10%							50		
235	CLASSROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
235A	OFFICE	23, 26	WINDOW CAULK	5-10%							25		
235A	OFFICE	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
235A	WOMEN'S RESTROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
235A	WOMEN'S RESTROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
235A	MEN'S RESTROOM	46	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK

GATEWAY COMMUNITY TECHNICAL COLLEGE  
NORTH HAVEN CAMPUS  
NORTH HAVEN, CT  
INVENTORY OF IDENTIFIED ASBESTOS-CONTAINING MATERIALS

4/23/02

ROOM NUMBER	ROOM NAME	HOMOSEGUS AREA	SUSPECT MATERIAL DESCRIPTION	ASBESTOS CONTENT (%)	FLOORING (SF)	CEILING (SF)	WALLS (SF)	PIPE INSULATION (LF)	PIPE FITTING INSULATION (EA)	OUTRIGAT INSULATION (SF)	MISCELLANEOUS (LF)	MISCELLANEOUS (SF)	COMMENTS/CONDITION
SECOND FLOOR													
	CLASSROOM WING												
	MEN FACULTY	48	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
	MEN HANDICAPPED	48	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
	WOMEN HANDICAPPED	48	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
	STORAGE	48	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
	STORAGE	48	DOOR FRAME CAULK	7%							35		AT JOINT BETWEEN DOOR FRAME/BLOCK
STAIRWELLS													
	STAIRWELL A	30, 2	GRN/RED TAN 8" FL TILE/MASTIC	3% / 8%	220								ACM TILE IS AT FIRST FLOOR LANDING ONLY
	STAIRWELL B	48	DOOR FRAME CAULK	7%							70		AT JOINT BETWEEN DOOR FRAME/BLOCK
	STAIRWELL C	48	DOOR FRAME CAULK	7%							175		AT JOINT BETWEEN DOOR FRAME/BLOCK
	STAIRWELL D	30, 2	GRN/RED TAN 8" FL TILE/MASTIC	3% / 5%	120						240		AT JOINT BETWEEN DOOR FRAME/BLOCK
	STAIRWELL E	48	DOOR FRAME CAULK	7%							80		ACM TILE AT 1ST FL LANDING UNDER STAIRS
	STAIRWELL F	23, 28	WINDOW CAULK	5-10%							80		AT JOINT BETWEEN DOOR FRAME/BLOCK
	STAIRWELL G	48	DOOR FRAME CAULK	7%							80		AT JOINT BETWEEN DOOR FRAME/BLOCK
	STAIRWELL H	23, 28	WINDOW CAULK	5-10%							80		AT JOINT BETWEEN DOOR FRAME/BLOCK
	STAIRWELL I	48	DOOR FRAME CAULK	7%							20		AT JOINT BETWEEN DOOR FRAME/BLOCK
	STAIRWELL J	23, 28	WINDOW CAULK	5-10%							40		AT JOINT BETWEEN DOOR FRAME/BLOCK
	STAIRWELL K	48	DOOR FRAME CAULK	7%							20		AT JOINT BETWEEN DOOR FRAME/BLOCK
	STAIRWELL L	48	DOOR FRAME CAULK	7%							40		AT JOINT BETWEEN DOOR FRAME/BLOCK
TOTALS:					71,305	0	0	0	952	950	11,840	0	

**APPENDIX B**

**Asbestos Bulk Sample Laboratory Data Sheets/Chain of Custody**



**DELTA Environmental Services, Inc.**

# ChemScope

INDUSTRIAL HYGIENE • ENVIRONMENTAL CHEMISTRY  
P.O. BOX 389 FAIR HAVEN STATION, NEW HAVEN, CT 06513-0389

15 Moulthrop Street., North Haven, CT 06473-3686 • Phone (203) 865-5605 • Fax (203) 498-1610

## Certificate Of Analysis

*Delta Environmental Services, Inc.*

*PO Box 564*

*81 Schoolground Road*

*Branford CT 06405*

3/1/02

CS# 148-414

Page 1 of 12

*Bulk sample(s) from Gateway Community Technical College, North Haven CT received from customer on 2/26/02*

*Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116*

### Sample Identification

### Findings

*148-414-1 Tan hard 9x9 floor tile (on black mastic) / 1-Maintenance Shop*

*Not Analyzed*

*148-414-2 Black mastic (from under sample #1) / 2-Maintenance Shop*

*9% Chrysotile Asbestos  
16% Non-Fibrous Particles  
75% Volatile on Ignition*

*148-414-3 Brown granular plaster (ceiling) / 3-Maintenance Shop*

*No Asbestos Detected  
<1% Cellulose  
100% Non-Fibrous Particles*

*148-414-4 White hard plaster (ceiling) / 4-Maintenance Shop*

*No Asbestos Detected  
100% Non-Fibrous Particles*

**NVLAP** ACCREDITED LAB# 101061-0 **AIHA** ACCREDITED LAB # 100134

Bulk sample(s) from Gateway Community Technical College, North Haven CT received from customer on 2/26/02

Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116

**Sample Identification**

**Findings**

148-414-5 White crumbly joint compound with a gray painted face () / 5-Maintenance Shop

No Asbestos Detected  
91% Non-Fibrous Particles  
9% Volatile on Ignition

148-414-6 White crumbly sheetrock with brown fibrous paper layer with a gray painted face () / 6-Maintenance Shop

No Asbestos Detected  
15% Fiberglass  
20% Cellulose  
65% Non-Fibrous Particles

148-414-7 Gray crumbly sheetrock with brown fibrous paper layer with a white coating () / 7-Maintenance Shop

No Asbestos Detected  
15% Fiberglass  
20% Cellulose  
65% Non-Fibrous Particles

148-414-8 Tan brittle glue dab () / 8-Maintenance Shop

No Asbestos Detected  
48% Non-Fibrous Particles  
52% Volatile on Ignition

148-414-9 Tan brittle glue dab () / 9-Maintenance Shop

No Asbestos Detected  
47% Non-Fibrous Particles  
53% Volatile on Ignition

148-414-10 Tan brittle glue dab with a white coating (on brown fibrous material) / 10-Maintenance Shop

No Asbestos Detected  
47% Non-Fibrous Particles  
53% Volatile on Ignition

Bulk sample(s) from Gateway Community Technical College, North Haven CT received from customer on 2/26/02

Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116

**Sample Identification**

**Findings**

148-414-11 Gray fibrous 2x2 rough texture ceiling tile with a white face (Armstrong) / 11-Corridor Near Room 106

No Asbestos Detected  
43% Mineral Wool  
29% Non-Fibrous Particles  
28% Volatile on Ignition

148-414-12 Gray fibrous 2x2 rough texture ceiling tile with a white face (Armstrong) / 12-Corridor Near Room 106

No Asbestos Detected  
44% Mineral Wool  
29% Non-Fibrous Particles  
27% Volatile on Ignition

148-414-13 Gray fibrous 2x2 rough texture ceiling tile with a white face (Armstrong) / 13-Corridor Near Room 106

No Asbestos Detected  
42% Mineral Wool  
28% Non-Fibrous Particles  
30% Volatile on Ignition

148-414-14 Gray fibrous mudded pipe fitting () / 14-Above Corridor Ceiling

9% Chrysotile Asbestos  
50% Mineral Wool  
41% Non-Fibrous Particles

148-414-15 Brown and yellow baseboard molding adhesive () / 15-Room 134

No Asbestos Detected  
4% Wollastonite  
35% Non-Fibrous Particles  
61% Volatile on Ignition

148-414-16 Brown and yellow baseboard molding adhesive (on white and gray hard plaster) / 16-Room 134

No Asbestos Detected  
<1% Wollastonite  
38% Non-Fibrous Particles  
62% Volatile on Ignition



Bulk sample(s) from Gateway Community Technical College, North Haven CT received from customer on 2/26/02

Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116

**Sample Identification**

**Findings**

148-414-17. Gray, black and brown floor leveler () / 17-Room  
134

5% Chrysotile Asbestos  
84% Non-Fibrous Particles  
11% Volatile on Ignition

148-414-18 Gray, black and brown floor leveler () / 18-Room  
134

Not Analyzed

148-414-19 Gray, black and brown floor leveler () / 19-Room  
134

Not Analyzed

148-414-20 Gray hard window glazing with a black face () /  
20-Room 134

<1% Chrysotile Asbestos  
83% Non-Fibrous Particles  
17% Volatile on Ignition

148-414-21 Gray hard window glazing with a black face () /  
21-Room 134

<1% Chrysotile Asbestos  
<1% Fiberglass  
85% Non-Fibrous Particles  
15% Volatile on Ignition

148-414-22 Black pliable molding insulation strip with a  
white face () / 22-Room 134

No Asbestos Detected  
25% Non-Fibrous Particles  
75% Volatile on Ignition

*Bulk sample(s) from Gateway Community Technical College, North Haven CT received from customer on 2/26/02*

*Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116*

**Sample Identification**

**Findings**

*148-414-23 Gray and white hard caulking () / 23-Room 134-  
Interior Along Window Assembly*

*5% Chrysotile Asbestos  
52% Non-Fibrous Particles  
43% Volatile on Ignition*

*148-414-24 Gray and white hard caulking () / 24-Room 134-  
Interior Along Window Assembly*

*Not Analyzed*

*148-414-25 Gray and white hard caulking () / 25-Room 134-  
Interior Along Window Assembly*

*Not Analyzed*

*148-414-26 Gray hard floor leveler (on black mastic) / 26-  
Vestibule To Room 132*

*No Asbestos Detected  
93% Non-Fibrous Particles  
7% Volatile on Ignition*

*148-414-27 Brown hard caulking (at brick wall joint) / 27-  
Vestibule To Room 132*

*No Asbestos Detected  
12% Wollastonite  
22% Non-Fibrous Particles  
66% Volatile on Ignition*

*148-414-28 Gray and brown hard window caulking () / 28-  
Room 230*

*10% Chrysotile Asbestos  
54% Non-Fibrous Particles  
36% Volatile on Ignition*

Bulk sample(s) from Gateway Community Technical College, North Haven CT received from customer on 2/26/02

Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116

**Sample Identification**

**Findings**

148-414-29 Dark brown baseboard molding adhesive () / 29-Room 230

No Asbestos Detected  
4% Wollastonite  
39% Non-Fibrous Particles  
57% Volatile on Ignition

148-414-30 Tan hard 9x9 floor tile with black trim coloring () / 30-Room 230

3% Chrysotile Asbestos  
70% Non-Fibrous Particles  
27% Volatile on Ignition

148-414-31 Tan pliable baseboard molding adhesive () / 31-Area Of Pefuge

No Asbestos Detected  
<1% Wollastonite  
25% Non-Fibrous Particles  
75% Volatile on Ignition

148-414-32 Brown hard 12x12 floor tile with white streaks (from under orange mastic, on black mastic) / 32-Second Floor Corridor

<1% Chrysotile Asbestos  
75% Non- Fibrous Particles  
25% Volatile on Ignition

148-414-33 Brown hard 12x12 floor tile with white streaks (from under orange mastic, on black mastic) / 33-Second Floor Corridor

<1% Chrysotile Asbestos  
77% Non- Fibrous Particles  
23% Volatile on Ignition

148-414-34 Brown hard 12x12 floor tile with white streaks (from under orange mastic, on black mastic) / 34-Second Floor Corridor

<1% Chrysotile Asbestos  
76% Non- Fibrous Particles  
24% Volatile on Ignition

Bulk sample(s) from Gateway Community Technical College, North Haven CT received from customer on 2/26/02

Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116

**Sample Identification**

**Findings**

148-414-35 Black mastic (from under above brown hard 12x12 floor tile with white streaks) / 35-Second Floor Corridor

10% Chrysotile Asbestos  
15% Non-Fibrous Particles  
75% Volatile on Ignition

148-414-36 Light gray fibrous 1x1 ceiling tile with a white face () / 36-Projection Booth

No Asbestos Detected  
67% Mineral Wool  
17% Non-Fibrous Particles  
16% Volatile on Ignition

148-414-37 Light gray fibrous 1x1 ceiling tile with a white face () / 37-Projection Booth

No Asbestos Detected  
68% Mineral Wool  
17% Non-Fibrous Particles  
15% Volatile on Ignition

148-414-38 Light gray fibrous 1x1 ceiling tile with a white face () / 38-Projection Booth

No Asbestos Detected  
68% Mineral Wool  
17% Non-Fibrous Particles  
15% Volatile on Ignition

148-414-39 Beige fibrous accoustical board with a white face (behind above light gray fibrous 1x1 ceiling tile with a white face) / 39-Projection Booth

No Asbestos Detected  
70% Mineral Wool  
18% Non-Fibrous Particles  
12% Volatile on Ignition

148-414-40 Beige fibrous accoustical board with a white face (behind above light gray fibrous 1x1 ceiling tile with a white face) / 40-Projection Booth

No Asbestos Detected  
71% Mineral Wool  
18% Non-Fibrous Particles  
11% Volatile on Ignition

Bulk sample(s) from Gateway Community Technical College, North Haven CT received from customer on 2/26/02

Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116

**Sample Identification**

**Findings**

148-414-41 Beige fibrous accoustical board with a white face (behind above light gray fibrous 1x1 ceiling tile with a white face) / 41-Projection Booth

No Asbestos Detected  
70% Mineral Wool  
17% Non-Fibrous Particles  
13% Volatile on Ignition

148-414-42 Tan and gray hard granite pattern 12x12 floor tile (on brown/black mastic) / 42-Projection Booth

7% Chrysotile Asbestos  
67% Non-Fibrous Particles  
26% Volatile on Ignition

148-414-43 Tan and gray hard granite pattern 12x12 floor tile (on brown/black mastic) / 43-Projection Booth

Not Analyzed

148-414-44 Tan and gray hard granite pattern 12x12 floor tile (on brown/black mastic) / 44-Projection Booth

Not Analyzed

148-414-45 Brown/black mastic (from under above tan and gray hard granite pattern 12x12 floor tile) / 45-Projection Booth

13% Chrysotile Asbestos  
24% Non-Fibrous Particles  
63% Volatile on Ignition

148-414-46 Gray hard door frame caulk () / 46-Projection Booth

7% Chrysotile Asbestos  
60% Non-Fibrous Particles  
33% Volatile on Ignition

Bulk sample(s) from Gateway Community Technical College, North Haven CT received from customer on 2/26/02

Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116

**Sample Identification**

**Findings**

148-414-47 White crumbly joint compound with a gray painted face () / 47-Video Conference Center

No Asbestos Detected  
90% Non-Fibrous Particles  
10% Volatile on Ignition

148-414-48 White crumbly joint compound with a gray painted face () / 48-Video Conference Center

No Asbestos Detected  
89% Non-Fibrous Particles  
11% Volatile on Ignition

148-414-49 White crumbly joint compound with a gray painted face () / 49-Video Conference Center

No Asbestos Detected  
91% Non-Fibrous Particles  
9% Volatile on Ignition

148-414-50 Brown granular plaster coat (wall) / 50-Video Conference Center

No Asbestos Detected  
100% Non-Fibrous Particles

148-414-51 White hard plaster layer on a brown granular plaster layer with a green painted face with a white coating (wall) / 51-Video Conference Center

No Asbestos Detected  
100% Non-Fibrous Particles

148-414-52 Black and white plaster top coat (wall) / 52-Video Conference Center

No Asbestos Detected  
65% Non-Fibrous Particles  
35% Volatile on Ignition

Bulk sample(s) from Gateway Community Technical College, North Haven CT received from customer on 2/26/02

Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116

**Sample Identification**

**Findings**

148-414-53 Beige fibrous 1x1 ceiling tile with an off-white face () / 53-Room 213

No Asbestos Detected  
66% Mineral Wool  
17% Non-Fibrous Particles  
17% Volatile on Ignition

148-414-54 Beige fibrous 1x1 ceiling tile with an off-white face () / 54-Room 213

No Asbestos Detected  
64% Mineral Wool  
16% Non-Fibrous Particles  
20% Volatile on Ignition

148-414-55 Beige fibrous 1x1 ceiling tile with an off-white face () / 55-Room 213

No Asbestos Detected  
66% Mineral Wool  
16% Non-Fibrous Particles  
18% Volatile on Ignition

148-414-56 Brown hard glue dab (from under above beige fibrous 1x1 ceiling tile with an off-white face) / 56-Room 213

No Asbestos Detected  
54% Non-Fibrous Particles  
46% Volatile on Ignition

148-414-57 Brown hard glue dab (from under above beige fibrous 1x1 ceiling tile with an off-white face) / 57-Room 213

No Asbestos Detected  
51% Non-Fibrous Particles  
49% Volatile on Ignition

148-414-58 Brown hard glue dab (from under above beige fibrous 1x1 ceiling tile with an off-white face) / 58-Room 213

No Asbestos Detected  
51% Non-Fibrous Particles  
49% Volatile on Ignition

Bulk sample(s) from Gateway Community Technical College, North Haven CT received from customer on 2/26/02

Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116

**Sample Identification**

**Findings**

148-414-59 Dark brown baseboard molding adhesive (on white and gray hard plaster) / 59-Room 213

No Asbestos Detected  
1% Wollastonite  
49% Non-Fibrous Particles  
50% Volatile on Ignition

148-414-60 White and gray hard plaster (from under sample #59) / 59-Room 213

No Asbestos Detected  
100% Non-Fibrous Particles

148-414-61 Beige and white accoustical panel fragments () / 60-Room 213

No Asbestos Detected  
40% Non-Fibrous Particles  
60% Volatile on Ignition



Bulk sample(s) from Gateway Community Technical College, North Haven CT received from customer on 2/26/02

Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116

Sample Identification

Findings

Accreditation by the National Institute of Standards and Technology (NIST) # 101061-0  
Accreditation by the American Industrial Hygiene Association (AIHA) #100134  
Connecticut Department of Public Health (DPH) Approved Environmental Lab PH 0581  
Accreditation Program (NVLAP) does not imply endorsement by this Federal Agency.  
This report pertains only to the samples tested and may not be reproduced in part.  
The scope of Accreditation referenced in this report pertains to bulk asbestos analysis by PLM.  
See test parameters on reverse side of this report.

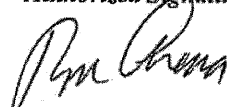
Signature (if applicable)

Signature (if applicable)

Authorized Signature: or Authorized Signature:

Analyst

Inspector

  
Ronald D. Arena  
Director

Suzanne Cristante  
QA Coordinator

Chem Scope, Inc.  
15 Moulthrop Street, North Haven CT 06473  
203-865-5605, fax 203-498-1610

Form FL-4 Rev 5/01

CHAIN OF CUSTODY

Faxed \_\_\_\_\_  
Called \_\_\_\_\_  
Logged \_\_\_\_\_

Sample Source: Gateway CTC - North Haven, CT CS Job # \_\_\_\_\_

Sampled by JSM Date Sampled 2/25/02 Customer Name Delta Environmental

Date Received 2/26/02

CS Sample #	Client Sample #	Sample Description (liters, sq ft, color, physical description)	Comments
	1	9" Tan tile	Maintenance shop ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
	2	MARK	
	3	Plaster Ceiling	
	4	↓	
	5	Joint Compound	
	6	Sheetrock	
	7	↓	
	8	Glue Dots	
	9	↓	
	10	↓	
	11	2x2 Rough Texture Ceiling Tile - Armstrong	Corridor Near 106
	12	↓	Above Corridor Ceiling Room 134 ↓ ↓ ↓ ↓ ↓ ↓ ↓
	13	↓	
	14	Mudded Pipe Fitting	
	15	Baseboard molding Adhesive	
	16	↓	
	17	Floor Leveler	
	18	↓	
	19	↓	

Sample Turnaround: 3-5 Day

Analysis Requested (if variable, use comment column) Asbestos PCM

Disposition of Sample: Return \_\_\_\_\_ Do not return X

Relinquished by Jane R. McIntosh Date 2/26/02 Time 10:00 AM Received by \_\_\_\_\_  
Relinquished by \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received by \_\_\_\_\_

If sample(s) are going to Outside Laboratory: Name of Laboratory _____
Method of Transportation to Laboratory: _____
Result Transmittal Instructions for Outside Laboratory: <u>PLEASE FAX RESULTS</u>

Result Transmittal Instructions for Chem Scope upon receipt of the results from Outside Laboratory: \_\_\_\_\_

Other Special Instructions: \_\_\_\_\_

Chem Scope, Inc.  
15 Moulthrop Street, North Haven CT 06473  
203-865-5605, fax 203-498-1610

Form FL-4 Rev 5/01

CHAIN OF CUSTODY

Faxed \_\_\_\_\_  
Called \_\_\_\_\_  
Logged \_\_\_\_\_

Sample Source: Gateway CTC - North Haven, CT CS Job # \_\_\_\_\_

Sampled by JEM Date Sampled 2/25/02 Customer Name Delta Environmental

Date Received 2/26/02

CS Sample #	Client Sample #	Sample Description (liters, sq ft, color, physical description)	Comments
	20	Window Glazing	Room 131
	21	↓	↓
	22	Black molding Invol. Strip	↓
	23	Caulk-Interior along window Assembly	↓
	24	↓	↓
	25	↓	↓
	26	Floor Leveler/old Tile mastic Below	Vehicle to 132
	27	Brown Caulk at Brick wall Joint	↓
	28	Window Caulk	Room 230
	29	Older Dark Brown Baseboard molding Adhesive	↓
	30	9" Tan Floor Tile	↓
	31	Newer Tan Baseboard molding Adhesive	Area of Refuge
	32	Brown 12" Floor Tile	2nd Fl. Corridor
	33	↓	↓
	34	↓	↓
	35	Mastic From Above	↓
	36	1'x1' ceiling Tile	Projecting Booth
	37	↓	↓
	38	↓	↓

Sample Turnaround: 3-5 Day

Analysis Requested (if variable, use comment column) Asbestos PCM

Disposition of Sample: Return \_\_\_\_\_ Do not return X

Relinquished by Jane R. McIntosh Date 2/26/02 Time 10:00 AM Received by \_\_\_\_\_  
Relinquished by \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received by \_\_\_\_\_

If sample(s) are going to Outside Laboratory: Name of Laboratory \_\_\_\_\_

Method of Transportation to Laboratory: \_\_\_\_\_

Result Transmittal Instructions for Outside Laboratory: PLEASE FAX RESULTS

Result Transmittal Instructions for Chem Scope upon receipt of the results from Outside Laboratory: \_\_\_\_\_

Other Special Instructions: \_\_\_\_\_

Chem Scope, Inc.  
15 Moulthrop Street, North Haven CT 06473  
203-865-5605, fax 203-498-1610

Form FL-4 Rev 5/01

CHAIN OF CUSTODY

Faxed \_\_\_\_\_  
Called \_\_\_\_\_  
Logged \_\_\_\_\_

Sample Source: Gateway CTC - North Haven, CT CS Job # \_\_\_\_\_

Sampled by JSM Date Sampled 2/25/02 Customer Name Delta Environmental

Date Received 2/26/02

CS Sample #	Client Sample #	Sample Description (liters, sq ft, color, physical description)	Comments
	39	Acoustical Board Behind 36-38	Page 100 Booth
	40	↓	↓
	41	↓	↓
	42	Tan 12" Granite Pattern Floor Tile	↓
	43	↓	↓
	44	↓	↓
	45	Mudite From Above	↓
	46	Door Frame Caulk	↓
	47	Joint Compound	Videoconference Center
	48	↓	↓
	49	↓	↓
	50	Wall Plaster - Brown Coat	↓
	51	Wall Plaster - Both Coats	↓
	52	Wall Plaster - Top Coat	↓
	53	12" Ceiling Tile	Room 213
	54	↓	↓
	55	↓	↓
	56	Glue Dots From Above	↓
	57	↓	↓

Sample Turnaround: 3-5 Days

Analysis Requested (if variable, use comment column) Asbestos PCM

Disposition of Sample: Return \_\_\_\_\_ Do not return X

Relinquished by James R. Moulthrop Date 2/26/02 Time 10:00 AM Received by \_\_\_\_\_  
Relinquished by \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received by \_\_\_\_\_

If sample(s) are going to Outside Laboratory: Name of Laboratory _____
Method of Transportation to Laboratory: _____
Result Transmittal Instructions for Outside Laboratory: <u>PLEASE FAX RESULTS</u>

Result Transmittal Instructions for Chem Scope upon receipt of the results from Outside Laboratory: \_\_\_\_\_

Other Special Instructions: \_\_\_\_\_

Form FL-4 Rev 5/01

Faxed \_\_\_\_\_  
Called \_\_\_\_\_  
Logged \_\_\_\_\_

Date Received 2/26/02

Other Special Instructions: \_\_\_\_\_

# ChemScope

INDUSTRIAL HYGIENE • ENVIRONMENTAL CHEMISTRY  
P.O. BOX 389 FAIR HAVEN STATION, NEW HAVEN, CT 06513-0389

15 Moulthrop Street., North Haven, CT 06473-3686 • Phone (203) 865-5605 • Fax (203) 498-1610

## Certificate Of Analysis

Delta Environmental Services, Inc.

PO Box 564

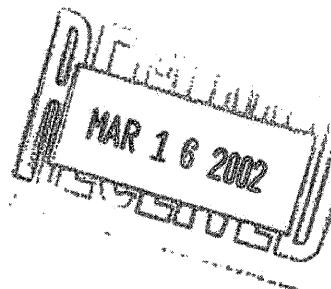
81 Schoolground Road

Branford CT 06405

3/13/02

CS# 148-553

Page 1 of 2



Bulk sample(s) from Gateway Community Technical College, received from customer on 3/13/02

Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116

### Sample Identification

### Findings

148-553-1 Light gray pliable ductwork caulk () / 61-Room 111

No Asbestos Detected  
59% Non- Fibrous Particles  
37% Volatile on Ignition  
4 % Mineral Wool

148-553-2 Gray and light blue crumbly with beige woven boiler breeching () / 62

No Asbestos Detected  
23% Non- Fibrous Particles  
45% Fiberglass  
30% Mineral Wool  
2% Synthetic Fibers

148-553-3 Gray fibrous boiler insulation () / 63

20% Chrysotile Asbestos  
25% Amosite Asbestos  
35% Non-Fibrous Particles  
20% Mineral Wool

148-553-4 Off-white hard caulk with an orange face () / 64-At Flue

No Asbestos Detected  
78% Non- Fibrous Particles  
8% Volatile on Ignition  
14% Wollastonite

**NVLAP** ACCREDITED LAB# 101061-0 **AIHA** ACCREDITED LAB # 100134

Bulk sample(s) from Gateway Community Technical College, received from customer on 3/13/02

Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116

Sample Identification

Findings

Accreditation by the National Institute of Standards and Technology (NIST) # 101061-0

Accreditation by the American Industrial Hygiene Association (AIHA) #100134

Connecticut Department of Public Health (DPH) Approved Environmental Lab PH 0581

Accreditation Program (NVLAP) does not imply endorsement by this Federal Agency.

This report pertains only to the samples tested and may not be reproduced in part.

The scope of Accreditation referenced in this report pertains to bulk asbestos analysis by PLM.

See test parameters on reverse side of this report.

Signature (if applicable)

Signature (if applicable)

Authorized Signature: or Authorized Signature:

Analyst

Inspector

  
Ronald D. Arena  
Director

Suzanne Cristante  
QA Coordinator

**NVLAP** ACCREDITED LAB# 101061-0 **AIHA** ACCREDITED LAB # 100134

Form FL-4 Rev 5/01

Faxed \_\_\_\_\_  
Called \_\_\_\_\_  
Logged \_\_\_\_\_

Sampled by JPM Date Sampled 3/13/02 Customer Name \_\_\_\_\_

Date Received \_\_\_\_\_

[illegible]

Analysis Requested (if variable, use comment column) *Arrest for PCIM*

Relinquished by Juan M. M. Date 3/13/02 Time 9:00 AM Received by [Signature]  
Relinquished by \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received by \_\_\_\_\_

Method of Transportation to Laboratory:

Result Transmittal Instructions for Outside Laboratory: ***PLEASE FAX RESULTS***

Result Transmittal Instructions for Chem Scope upon receipt of the results from Outside Laboratory: \_\_\_\_\_

Other Special Instructions: \_\_\_\_\_



# ChemScope

INDUSTRIAL HYGIENE • ENVIRONMENTAL CHEMISTRY  
P.O. BOX 389 FAIR HAVEN STATION, NEW HAVEN, CT 06513-0389

15 Moulthrop Street., North Haven, CT 06473-3686 • Phone (203) 865-5605 • Fax (203) 498-1610

## Certificate Of Analysis

*Delta Environmental Services, Inc.*

*PO Box 564*

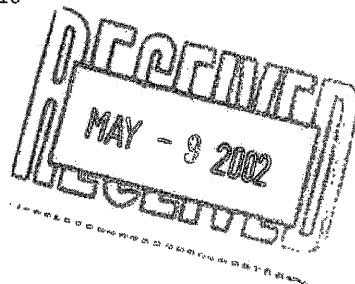
*81 Schoolground Road*

*Branford CT 06405*

5/2/02

CS# 149-53

Page 1 of 2



*Bulk sample(s) from Gateway Community Technical College, received from customer on 4/30/02*

*Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116*

### Sample Identification

*149-53-1 Gray fibrous spray-on fireproofing (64) / Gym Breezeway*

### Findings

*No Asbestos Detected  
<1% Cellulose  
80% Mineral Wool  
20% Non-Fibrous Particles*

*149-53-2 Gray fibrous spray-on fireproofing (65) / Gym Breezeway*

*No Asbestos Detected  
<1% Cellulose  
80% Mineral Wool  
20% Non-Fibrous Particles*

*149-53-3 Gray fibrous spray-on fireproofing (66) / Gym Breezeway*

*No Asbestos Detected  
<1% Cellulose  
80% Mineral Wool  
20% Non-Fibrous Particles*

**NVLAP** ACCREDITED LAB# 101061-0 **AIHA** ACCREDITED LAB # 100134

Bulk sample(s) from Gateway Community Technical College, received from customer on 4/30/02

Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116

**Sample Identification**

**Findings**

Accreditation by the National Institute of Standards and Technology (NIST) # 101061-0

Accreditation by the American Industrial Hygiene Association (AIHA) #100134

Connecticut Department of Public Health (DPH) Approved Environmental Lab PH 0581

Accreditation Program (NVLAP) does not imply endorsement by this Federal Agency.

This report pertains only to the samples tested and may not be reproduced in part.

The scope of Accreditation referenced in this report pertains to bulk asbestos analysis by PLM.

See test parameters on reverse side of this report.

Signature (if applicable)

Signature (if applicable)

Authorized Signature: or Authorized Signature:

Analyst

Inspector

  
Ronald D. Arena  
Director

Suzanne Cristante  
QA Coordinator

**NVLAP** ACCREDITED LAB# 101061-0 **AIHA** ACCREDITED LAB # 100134

Form FL-4 Rev 5/01.

Faxed \_\_\_\_\_  
Called \_\_\_\_\_  
Logged \_\_\_\_\_

CS Job #

Customer Name Delta Ambiental

Date Received 4/30/02

Sample Turnaround: 3-5 Days

04-30-02A09:17 RCVD

Analysis Requested (if variable, use comment column) Asterisks plm

Disposition of Sample: Return ☐ Do not return ☒

Relinquished by June L. Michel Date 4/30/02 Time 9:17am Received by GE  
Relinquished by \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received by \_\_\_\_\_

If sample(s) are going to Outside Laboratory: Name of Laboratory \_\_\_\_\_

Method of Transportation to Laboratory:

Result Transmittal Instructions for Outside Laboratory: **PLEASE FAX RESULTS**

**Result Transmittal Instructions for Chem Scope upon receipt of the results from Outside Laboratory:**

Other Special Instructions:

## **APPENDIX C**

### **Data From Previous Asbestos Sampling**



**DELTA Environmental Services,® Inc.**

ASBESTOS SAMPLING & INSPECTION REPORT -- BI-RCO-310 (ASB)  
GATEWAY COMMUNITY - TECHNICAL COLLEGE  
88 BASSETT ROAD, NORTH HAVEN, CT

**RECEIVED**

FEB 12 2002

**B • J • F • W**

Prepared by:  
APPLIED THERMODYNAMICS ASSOCIATES, INC.  
1129 MAIN STREET  
COVENTRY, CT 06238

Russell T. Smith, Licensed Asbestos Inspector  
State of CT License # 000057

Date: August 12, 1997

**ATA COPY**

# ASBESTOS SAMPLING, GATEWAY COMMUNITY COLLEGE, NORTH HAVEN

( TEM sample results marked by \* )

DATE	DESCRIPTION & LOCATION	% ACM	
76-01 1/15/97	Red 9x9 floor tile, cafeteria, first floor	> 1%	*
676-02 1/15/97	Gray 12x12 floor tile, entry to Room 120, first floor	NONE	*
76-03 1/15/97	Light brown wall base mastic, Room 121, first floor	NONE	
76-04 1/15/97	Tan 9x9 floor tile, room 122, first floor	> 1%	*
676-05 1/15/97	Light brown w/brown & white streaks 9x9 VAT, Room 127	> 1%	*
76-06 1/15/97	Gray 9x9 floor tile with white streaks, Room 136	> 1%	*
76-07 1/15/97	Light brown w/ streaks 12x12 floor tile, 2nd fl. breezeway	> 1%	*
676-08 1/15/97	Wall glue daubs, black, Room 208	NONE	
76-09 1/15/97	12"x12" acoustical wall tile, projection booth 201B	NONE	
76-10 1/15/97	Lt. tan marbled 12x12 floor tile, Room 201	> 1%	*
676-11 1/15/97	Solid tan 12x12 floor tile, some marbling, Room 201	NONE	*
76-12 1/15/97	White duct insulation, under fabric, mechanical room 1	40%	
76-13 1/15/97	Dark white w/black streaks 9x9 floor tile, Room 204	NONE	*
676-14 1/15/97	Lt. burgundy marbled 12x12 floor tile, Room 204	NONE	*
76-15 1/15/97	Lt. green streaked 9x9 floor tile, Room 204	> 1%	*
76-16 1/15/97	Wall plaster, white finish coat, Room 208	NONE	
676-17 1/15/97	Wall plaster, brown base coat, Room 208	NONE	
76-18 1/29/97	Type 1 2'x2' suspended ceiling panel, 1st fl. lobby near phones	NONE	
76-19 1/29/97	Type 1 2'x2' suspended ceiling panel, 1st fl. corr. near stair D	NONE	
576-20 1/29/97	Type 1 2'x2' suspended ceiling panel, 1st fl. main lobby, b. bd.	NONE	
21 1/29/97	Type 2 2'x4' suspended ceiling panel, Room 117a lounge	NONE	
576-22 1/29/97	Type 2 2'x4' suspended ceiling panel, Room 110	NONE	
576-23 1/29/97	Type 2 2'x4' suspended ceiling panel, bookstore	NONE	
76-24 1/29/97	Type 3 (old) 2'x4' suspended ceiling panel, cafeteria	NONE	
576-25 1/29/97	Type 3 (old) 2'x4' suspended ceiling panel, 1st fl. men's lav.	NONE	
576-26 1/29/97	Type 3 (old) 2'x4' suspended ceiling panel, Room 105	NONE	
76-27 1/29/97	Type 3 (new) 2'x4' suspended ceiling panel, Room 110	NONE	
576-28 1/29/97	Type 3 (new) 2'x4' suspended ceiling panel, cafeteria	NONE	
576-29 1/29/97	Type 3 (new) 2'x4' suspended ceiling panel, Room 105	NONE	
76-30 1/29/97	Type 4 2'x4' suspended ceiling panel, cafeteria	NONE	
76-31 1/29/97	Type 4 2'x4' suspended ceiling panel, cafeteria	NONE	
76-32 1/29/97	Jacket over fiberglass pipe insulation, Lobby main entr.	NONE	
76-33 1/29/97	Jacket over fiberglass pipe insulation, Room 110	NONE	
76-34 1/29/97	Jacket over fiberglass pipe insulation, kitchen serving line	NONE	
76-35 1/29/97	Spray-on beam insulation, Room 113, near corr. door	NONE	
76-36 1/29/97	Spray-on beam insulation, Room 113, left side wall	NONE	
76-37 1/29/97	Spray-on beam insulation, Room 113, far wall	NONE	
76-38 1/29/97	Type 5 2'x4' suspended ceiling panel, cafeteria	NONE	
76-39 1/29/97	Type 6 2'x2' suspended ceiling panel, dark room entry	NONE	
76-40 1/29/97	Wall plaster, finish coat, above kitchen hood	NONE	
76-41 1/29/97	Wall plaster, finish coat, above kitchen hood	NONE	
76 42 2/07/97	Gray stone pattern 12x12 floor tile, Room 216 closet	NONE	*
76 43 2/07/97	Light brown 12x12 marbled floor tile, Room 201b (Type 1)	> 1%	*
76-44 2/07/97	Pale pink/burgundy 9x9 floor tile, Room 204 (Type 11)	> 1%	*

76-45	2/07/97	Bright red with white streaks 9x9 floor tile, cafeteria	NONE	*
676-46	2/07/97	Of-white 12x12 gray marbled floor tile, Room 216 closet	NONE	*
676-47	2/07/97	Pink/burgundy marbled 12x12 floor tile, stair E top landing	NONE	*
76-48	2/07/97	Black sticky mastic under room 216 closet floor tiles	NONE	
76-49	2/07/97	Brown mastic, Room 201b floor base	NONE	
676-50	2/10/97	Solid off-white 12x12 floor tile, room 107c (maintenance)	NONE	*
76-51	2/10/97	Dark brown 12x12 floor tile, corridor front of 214	NONE	*
676-52	2/10/97	Yellow/gold 9x9 floor tile, patch in Room 012	> 1%	*
676-53	2/10/97	12x12 floor tile, tan w/gray & tan marbling, Room 117a	NONE	
76-54	2/10/97	12x12 floor tile, tan w/gray & tan marbling, Room 117a	NONE	
676-55	2/10/97	12x12 floor tile, faded pink/burgundy, Room 204 center	NONE	
676-56	2/10/97	12x12 floor tile, faded pink/burgundy, Room 204 center	NONE	
76-57	2/10/97	12x12 floor tile, gray w/red speckles, Room 141	NONE	
676-58	2/10/97	12x12 floor tile, gray w/red speckles, Room 141	NONE	
676-59	2/10/97	12x12 floor tile, off-white with gray marbling, Room 209	NONE	
76-60	2/10/97	12x12 floor tile, off-white with gray marbling, Room 210	NONE	
676-61	2/10/97	12x12 floor tile, bright pink/burgundy marbled, stair E exit	NONE	
676-62	2/10/97	12x12 floor tile, bright pink/burgundy marbled, stair B exit	NONE	
76-63	2/10/97	Wall plaster base coat, Room 211	NONE	
676-64	2/10/97	Wall plaster finish coat, Room 211	NONE	
76-65	2/10/97	Wall plaster base coat, Room 209	NONE	
76-66	2/10/97	Wall plaster finish coat, Room 209	NONE	
576-67	2/10/97	Wall plaster base coat, Room 213	NONE	
76-68	2/10/97	Wall plaster finish coat, Room 213	NONE	
76-69	2/10/97	12"x12" acoustical wall panel, type 1, Room 201b	NONE	
576-70	2/10/97	12"x12" acoustical wall panel, type 1, Room 201b	NONE	
76-71	2/10/97	12"x12" acoustical wall panel, type 2, Room 215	NONE	
76-72	2/10/97	12"x12" acoustical wall panel, type 2, Room 211	NONE	
76-73	2/10/97	12"x12" acoustical wall panel, type 2, Room 215	NONE	
76-74	2/10/97	Type 7 2x4 acoustical ceiling panel, Room 121	NONE	
76-75	2/10/97	Type 7 2x4 acoustical ceiling panel, Room 121	NONE	
76-76	2/10/97	Type 7 2x4 acoustical ceiling panel, Room 121	NONE	
76-77	2/10/97	Black wall glue, (formerly)behind chalk board, Room 208	NONE	
76-78	2/10/97	Black wall glue, (formerly)behind chalk board, Room 208	NONE	
76-79	2/10/97	Brown wall base glue, Room 127	15%	
76-80	2/10/97	White mudded elbow, Room 134	15%	
76-81	7/29/97	Floor tile, 12x12 stone pattern, dark rm. corr.	NONE	*
76-82	7/29/97	Floor tile, 12x12 stone pattern, dark room closet	NONE	*
76-83	7/29/97	Floor tile, 12x12 white with white & gray streaks, maint. off.	NONE	*
76-84	7/29/97	Floor tile, 12x12 white with white & gray streaks, maint. off.	NONE	*
76-85	7/29/97	Floor tile, 9x9 patch, white with black streaks, Room 204	NONE	*
76-86	7/29/97	Floor tile, 9x9 patch, white with black streaks, Room 204	NONE	*
76-87	7/29/97	Floor tile, 9x9 patch, gold/dk tan w/br. & wh. strks, Room 012	5%	*
76-88	7/29/97	Floor tile, 9x9 patch, gold/dk tan w/br. & wh. strks, Room 012	3%	*
76-89	7/29/97	Floor tile, 9x9 patch, gold/dk tan w/br. & wh. strks, Room 012	3%	*
76-90	7/29/97	Floor tile, 9x9 patch, bright red, cafeteria	NONE	*
76-91	7/29/97	Floor tile, 9x9 patch, bright red, cafeteria	NONE	*
76-92	7/29/97	Floor tile, 12x12 patch, brown marbled, corr. near 214	NONE	*
76-93	7/29/97	Floor tile, 12x12 patch, brown marbled, corr. near 214	NONE	*

# ENVIROMED SERVICES, INC.

---

---

## State of Connecticut

Department of Public Works

Bulk Sample Inspection Report

Facility:

Gateway Community Technical College  
North Haven, Connecticut

Project# BI-2B-753 (RCO-899)  
DPW# 46088  
EMS# 10319

March 9 & April 18, 1994

25 Science Park, New Haven, CT 06511  
(203) 786-5580 • FAX (203) 786-5579



## Executive Summary

On March 9 and April 18, 1994, state accredited inspectors from EnviroMed Services Inc. conducted a building inspection of Gateway Community Technical College, North Haven, Connecticut. The purpose of this inspection is to determine the presence of asbestos in all flooring materials to be disturbed during the current renovation of the building. Bulk samples were collected from all flooring materials suspected of containing asbestos. All bulk samples were collected and analyzed in accordance with regulations specified in 40 CFR 763.86 and 763.87.

A total of ninety-six bulk samples were collected from this building. Materials sampled and their description are indicated on the Vinyl Floor Tile and Description page. Please refer to this page for further information.

Based on laboratory analysis, the following results have been determined:

<u>Location</u>	<u>VAT Types Present</u>	<u>Square Footage of Area</u>
<u>First Floor</u>		
Stair I	3, 9, 10	70, 15, 15
Stair J	3, 9, 10	70, 15, 15
101	5, 13	840, 200
102	5	1040
102B	5	100
103	4	1000
104	4	275
104A	4	275
105	4	785
109A	4	325
113	3	50
<u>Second Floor</u>		
Administration Area (Locations 10-36)	3, 5, 9, 10	630, 300, 185, 185
Stair B	3, 9, 10	70, 15, 15
Stair C	3, 9, 10	70, 15, 15
Stair H	3, 9, 10	70, 15, 15

<u>Location</u>	<u>VAT Types Present</u>	<u>Square Footage of Area</u>
<u>Second Floor</u> (continued)		
54	15	2266
54A	15	63
54B	15	63
203	3	540
203A	3	140
203B	3	154
203C	3	247
203D	3	70
203E	3	12
203F	3	36
203G	3	380
203H	3	420
211	5	756
212	5	450
213	3	1120
218	4	756
220	4	1540
220A	4	20
220B	4	20
221A	3, 9, 10	1108, 237, 237
221B	3, 9, 10	1108, 237, 237
221C	3, 9, 10	168, 36, 36
230	3	435
231	4	342
231A	4	50
231B	4	120
231C	4	228

Third Floor

Stairs A, B	3, 9, 10	70, 15, 15
Stairs C, D	3, 9, 10	70, 15, 15
Stairs E, F	3, 9, 10	70, 15, 15
Stair H	3, 9, 10	35, 7.5, 7.5

<u>Location</u>	<u>VAT Types Present</u>	<u>Square Footage of Area</u>
-----------------	--------------------------	-------------------------------

Third Floor (continued)

Elect. Comm. Club	8	90
302	4, 5, 7, 13	275, 275, 457, 225
303	1, 2	1000, 232
306	2, 3, 4	124, 64, 1000
309	6, 7	750, 314
310	5	756
312	4	952
314	Not Accessible	
316	1, 2	954, 110
332	4	756
332A	4	195
333A	10	792
333B	10	230
333C	10	75
333D	10	143
333E	10	252
333F	10	132
333G	10	720
333H	10	75
333I	3, 9, 10	35, 7.5, 7.5
333J	10	986
334D	3, 9, 10	35, 7.5, 7.5

Type 11 was found in Stair E on the landing between the Second and Third Floors. There is approximately 15 square feet each of floor tile and mastic.

Type 12 was found on the Third Floor in the corridor next to Stair C. There is approximately 10 square feet each of floor tile and mastic.

Type 14 was found on the Third Floor under the carpet in Room 307. This material was not quantified.

All of the above three types were sampled because it was originally believed that the areas in which they are located were going to be disturbed. However, according to the construction/renovation schedule given to the inspectors on April 18, 1994 by Frank Amaretta (Public Works), these areas were not included.

All location numbers and square footage used were taken from the construction/renovation drawings provided by Frank Mercede and Sons, Inc., general contractor for the project.

Bulk samples were analyzed by EnviroMed's accredited laboratory (NVLAP #1514).

### Vinyl Floor Tile Type and Description

<u>Type #</u>	<u>Description</u>	<u>Asbestos-Containing?</u>	
		<u>Tile</u>	<u>Mastic</u>
1	12" x 12" Light Brown with Brown and White	No	Yes
2	12" x 12" Gray Stone Pattern Stick-on	No	N/A
3	9" x 9" Tan/Light Brown	No	Yes
4	9" x 9" Pewter/Brown with White	No	Yes
5	9" x 9" Light Green with White	Yes	Yes
6	12" x 12" Tan with Light Gray and White	No	Yes
7	12" x 12" Light Brown with Brown	No	Yes
8	12" x 12" Off-White with White and Gray	No	Yes
9	9" x 9" Red with White	No	Yes
10	9" x 9" Dark Green with White	Yes	Yes
11	9" x 9" Light Brown with Brown and White	No	Yes
12	9" x 9" Dark Green with White and Black	Yes	Yes
13	9" x 9" Off-White with Black and Gray	No	No
14	12" x 12" Beige with Brown	No	Yes
15	12" x 12" White with Green	No	No

**Yes** = Greater than 1% asbestos.

**No** = Asbestos content of 1% or less.

**N/A** = Not Applicable (The tile was a peel and stick type.)

### **Sample Log and Results Table**

**Sample Log and Results Table**

Job # 10319      Facility: Gateway Community Technical College  
North Haven, Connecticut

Sample #	Location	Material Sampled	Results
1	Second Floor Administration Area	9" x 9" Red with White Vinyl Floor Tile	None Detected
2	Second Floor Administration Area	9" x 9" Red with White Vinyl Floor Tile	None Detected
3	Second Floor Administration Area	9" x 9" Red with White Vinyl Floor Tile	None Detected
4	Second Floor Administration Area	Flooring Mastic under Samples 1-3	5% Asbestos
5	Second Floor Administration Area	Flooring Mastic under Samples 1-3	7% Asbestos
6	Second Floor Administration Area	Flooring Mastic under Samples 1-3	5% Asbestos
7	Second Floor Administration Area	9" x 9" Tan/Light Brown Vinyl Floor Tile	None Detected
8	Second Floor Administration Area	9" x 9" Tan/Light Brown Vinyl Floor Tile	None Detected
9	Second Floor Administration Area	9" x 9" Tan/Light Brown Vinyl Floor Tile	None Detected
10	Second Floor Administration Area	Flooring Mastic under Samples 7-9	10% Asbestos
11	Second Floor Administration Area	Flooring Mastic under Samples 7-9	8% Asbestos
12	Second Floor Administration Area	Flooring Mastic under Samples 7-9	8% Asbestos
13	Second Floor Administration Area	9" x 9" Dk. Green w/ White Vinyl Floor Tile	<1% Asbestos
14	Second Floor Administration Area	9" x 9" Dk. Green w/ White Vinyl Floor Tile	2% Asbestos
15	Second Floor Administration Area	9" x 9" Dk. Green w/ White Vinyl Floor Tile	2% Asbestos

16	<b>Second Floor Administration Area</b>	Flooring Mastic under Samples 13-15	6% Asbestos
17	<b>Second Floor Administration Area</b>	Flooring Mastic under Samples 13-15	6% Asbestos
18	<b>Second Floor Administration Area</b>	Flooring Mastic under Samples 13-15	5% Asbestos
19	<b>Second Floor Administration Area</b>	9" x 9" Lt. Green w/ White Vinyl Floor Tile	2% Asbestos
20	<b>Second Floor Administration Area</b>	9" x 9" Lt. Green w/ White Vinyl Floor Tile	2% Asbestos
21	<b>Second Floor Administration Area</b>	9" x 9" Lt. Green w/ White Vinyl Floor Tile	2% Asbestos
22	<b>Second Floor Administration Area</b>	Flooring Mastic under Samples 19-21	8% Asbestos
23	<b>Second Floor Administration Area</b>	Flooring Mastic under Samples 19-21	6% Asbestos
24	<b>Second Floor Administration Area</b>	Flooring Mastic under Samples 19-21	6% Asbestos
25	<b>Second Floor Administration Area</b>	Carpet Glue	None Detected
26	<b>Second Floor Administration Area</b>	Carpet Glue	None Detected
27	<b>Second Floor Administration Area</b>	Carpet Glue	None Detected
28	<b>Second Floor Administration Area</b>	Cove Molding Glue	None Detected
29	<b>Second Floor Administration Area</b>	Cove Molding Glue	None Detected
30	<b>Second Floor Administration Area</b>	Cove Molding Glue	None Detected
31	<b>Second Floor Administration Area</b>	Red Leveling Compound	None Detected
32	<b>Second Floor Administration Area</b>	Red Leveling Compound	None Detected



33	Second Floor Administration Area	Red Leveling Compound	None Detected
34	Third Floor Room 316	12" x 12" Light Brown with Brown and White Vinyl Floor Tile	None Detected
35	Third Floor Room 316	12" x 12" Light Brown with Brown and White Vinyl Floor Tile	None Detected
36	Third Floor Room 316	12" x 12" Light Brown with Brown and White Vinyl Floor Tile	None Detected
37	Third Floor Room 316	Flooring Mastic under Samples 34-36	8% Asbestos
38	Third Floor Room 316	Flooring Mastic under Samples 34-36	8% Asbestos
39	Third Floor Room 316	Flooring Mastic under Samples 34-36	8% Asbestos
40	Third Floor Room 316	12" x 12" Stone Pattern Stick-on Vinyl Floor Tile	None Detected
41	Third Floor Room 316	12" x 12" Stone Pattern Stick-on Vinyl Floor Tile	None Detected
42	Third Floor Room 316	12" x 12" Stone Pattern Stick-on Vinyl Floor Tile	None Detected
43	Third Floor Room 312	9" x 9" Pewter/Brown with White Vinyl Floor Tile	None Detected
44	Third Floor Room 312	9" x 9" Pewter/Brown with White Vinyl Floor Tile	None Detected
45	Third Floor Room 312	9" x 9" Pewter/Brown with White Vinyl Floor Tile	None Detected
46	Third Floor Room 312	Flooring Mastic under Samples 43-45	6% Asbestos
47	Third Floor Room 312	Flooring Mastic under Samples 43-45	6% Asbestos
48	Third Floor Room 312	Flooring Mastic under Samples 43-45	6% Asbestos
49	Third Floor Room 309	12" x 12" Tan with Light Gray and White Vinyl Floor Tile	<1% Asbestos

50	Third Floor Room 309	12" x 12" Tan with Light Gray and White Vinyl Floor Tile	<1% Asbestos
51	Third Floor Room 309	12" x 12" Tan with Light Gray and White Vinyl Floor Tile	<1% Asbestos
52	Third Floor Room 309	Flooring Mastic under Samples 49-51	10% Asbestos
53	Third Floor Room 309	Flooring Mastic under Samples 49-51	8% Asbestos
54	Third Floor Room 309	Flooring Mastic under Samples 49-51	8% Asbestos
55	Third Floor Room 309	12" x 12" Light Brown with Brown Vinyl Floor Tile	None Detected
56	Third Floor Room 309	12" x 12" Light Brown with Brown Vinyl Floor Tile	None Detected
57	Third Floor Room 309	12" x 12" Light Brown with Brown Vinyl Floor Tile	None Detected
58	Third Floor Room 309	Flooring Mastic under Samples 55-57	8% Asbestos
59	Third Floor Room 309	Flooring Mastic under Samples 55-57	8% Asbestos
60	Third Floor Room 309	Flooring Mastic under Samples 55-57	6% Asbestos
61	Third Floor Electronic Comm. Club	Flooring Mastic under Samples 64-66	10% Asbestos
62	Third Floor Electronic Comm. Club	Flooring Mastic under Samples 64-66	10% Asbestos
63	Third Floor Electronic Comm. Club	Flooring Mastic under Samples 64-66	10% Asbestos
64	Third Floor Electronic Comm. Club	12" x 12" Off-White with White and Gray Vinyl Floor Tile	<1% Asbestos
65	Third Floor Electronic Comm. Club	12" x 12" Off-White with White and Gray Vinyl Floor Tile	<1% Asbestos
66	Third Floor Electronic Comm. Club	12" x 12" Off-White with White and Gray Vinyl Floor Tile	<1% Asbestos

67	<b>Stairwell E</b> Landing b/w 2nd & 3rd Flrs	Flooring Mastic under Samples 70-72	7% Asbestos
68	<b>Stairwell E</b> Landing b/w 2nd & 3rd Flrs	Flooring Mastic under Samples 70-72	7% Asbestos
69	<b>Stairwell E</b> Landing b/w 2nd & 3rd Flrs	Flooring Mastic under Samples 70-72	7% Asbestos
70	<b>Stairwell E</b> Landing b/w 2nd & 3rd Flrs	9" x 9" Light Brown with Brown and White Vinyl Floor Tile	<1% Asbestos
71	<b>Stairwell E</b> Landing b/w 2nd & 3rd Flrs	9" x 9" Light Brown with Brown and White Vinyl Floor Tile	None Detected
72	<b>Stairwell E</b> Landing b/w 2nd & 3rd Flrs	9" x 9" Light Brown with Brown and White Vinyl Floor Tile	None Detected
73	<b>Third Floor</b> Corridor Next to Stair C	9" x 9" Dark Green with White and Black Vinyl Floor Tile	3% Asbestos
74	<b>Third Floor</b> Corridor Next to Stair C	9" x 9" Dark Green with White and Black Vinyl Floor Tile	3% Asbestos
75	<b>Third Floor</b> Corridor Next to Stair C	9" x 9" Dark Green with White and Black Vinyl Floor Tile	2% Asbestos
76	<b>Third Floor</b> Corridor Next to Stair C	Flooring Mastic under Samples 73-75	3% Asbestos
77	<b>Third Floor</b> Corridor Next to Stair C	Flooring Mastic under Samples 73-75	4% Asbestos
78	<b>Third Floor</b> Corridor Next to Stair C	Flooring Mastic under Samples 73-75	3% Asbestos
79	<b>Third Floor</b> Room 304	9" x 9" Off-White with Black and Gray Vinyl Floor Tile	None Detected
80	<b>Third Floor</b> Room 304	9" x 9" Off-White with Black and Gray Vinyl Floor Tile	None Detected
81	<b>Third Floor</b> Room 304	9" x 9" Off-White with Black and Gray Vinyl Floor Tile	None Detected
82	<b>Third Floor</b> Room 304	Flooring Mastic under Samples 79-81	<1% Asbestos
83	<b>Third Floor</b> Room 304	Flooring Mastic under Samples 79-81	None Detected

84	Third Floor Room 304	Flooring Mastic under Samples 79-81	None Detected
85	Third Floor Room 307	Flooring Mastic under Samples 88-90	5% Asbestos
86	Third Floor Room 307	Flooring Mastic under Samples 88-90	6% Asbestos
87	Third Floor Room 307	Flooring Mastic under Samples 88-90	5% Asbestos
88	Third Floor Room 307	12" x 12" Beige with Brown Vinyl Floor Tile	1% Asbestos
89	Third Floor Room 307	12" x 12" Beige with Brown Vinyl Floor Tile	<1% Asbestos
90	Third Floor Room 307	12" x 12" Beige with Brown Vinyl Floor Tile	<1% Asbestos
91	Second Floor Room 54	Flooring Mastic under Samples 94-96	None Detected
92	Second Floor Room 54	Flooring Mastic under Samples 94-96	None Detected
93	Second Floor Room 54	Flooring Mastic under Samples 94-96	None Detected
94	Second Floor Room 54	12" x 12" White with Green Vinyl Floor Tile	None Detected
95	Second Floor Room 54	12" x 12" White with Green Vinyl Floor Tile	None Detected
96	Second Floor Room 54	12" x 12" White with Green Vinyl Floor Tile	None Detected

## **APPENDIX D**

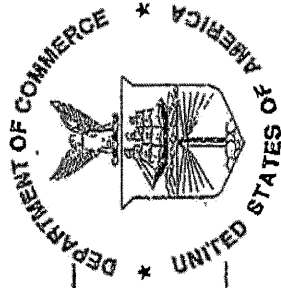
### **Laboratory and Inspector Accreditations**



**DELTA Environmental Services,® Inc.**

United States Department of Commerce  
National Institute of Standards and Technology

**NVLAP<sup>®</sup>**



ISO/IEC GUIDE 25:1990  
ISO 9002:1987

**Certificate of Accreditation**

**CHEMSCOPE, INC.**  
NORTH HAVEN, CT

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

**BULK ASBESTOS FIBER ANALYSIS**

March 31, 2002

Effective through:

*David F. Alderman*

For the National Institute of Standards and Technology

NVLAP Lab Code: 101061-0

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTICUT  
THE INDIVIDUAL NAMED BELOW IS LICENSED  
BY THIS DEPARTMENT AS A

ASBESTOS CONSULTANT - INSP / MGMT - PLANNER

LICENSE NO.

000044

CURRENT THROUGH

02/28/03

VALIDATION NO.

02-641409

JAMES P. MCCARTHY

James P. McCarthy

SIGNATURE

John J. G. Jr.

COMMISSIONER, DEPT. OF PUBLIC HEALTH

**APPENDIX E**  
**Building Diagrams**



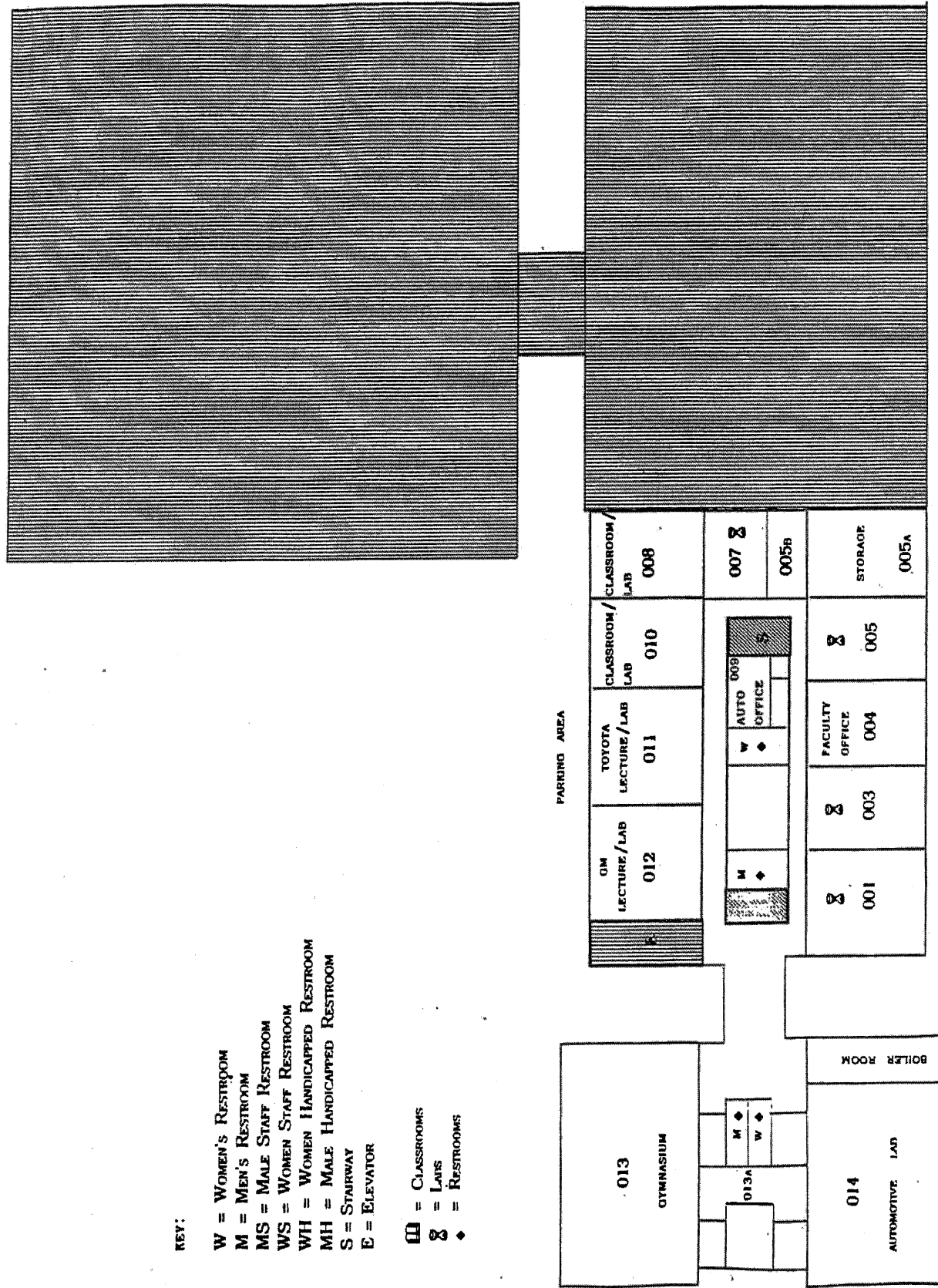
**DELTA Environmental Services, Inc.**



## KEY:

W = WOMEN'S RESTROOM  
 M = MEN'S RESTROOM  
 MS = MALE STAFF RESTROOM  
 WS = WOMEN STAFF RESTROOM  
 WH = WOMEN HANDICAPPED RESTROOM  
 MH = MALE HANDICAPPED RESTROOM  
 S = STAIRWAY  
 E = ELEVATOR

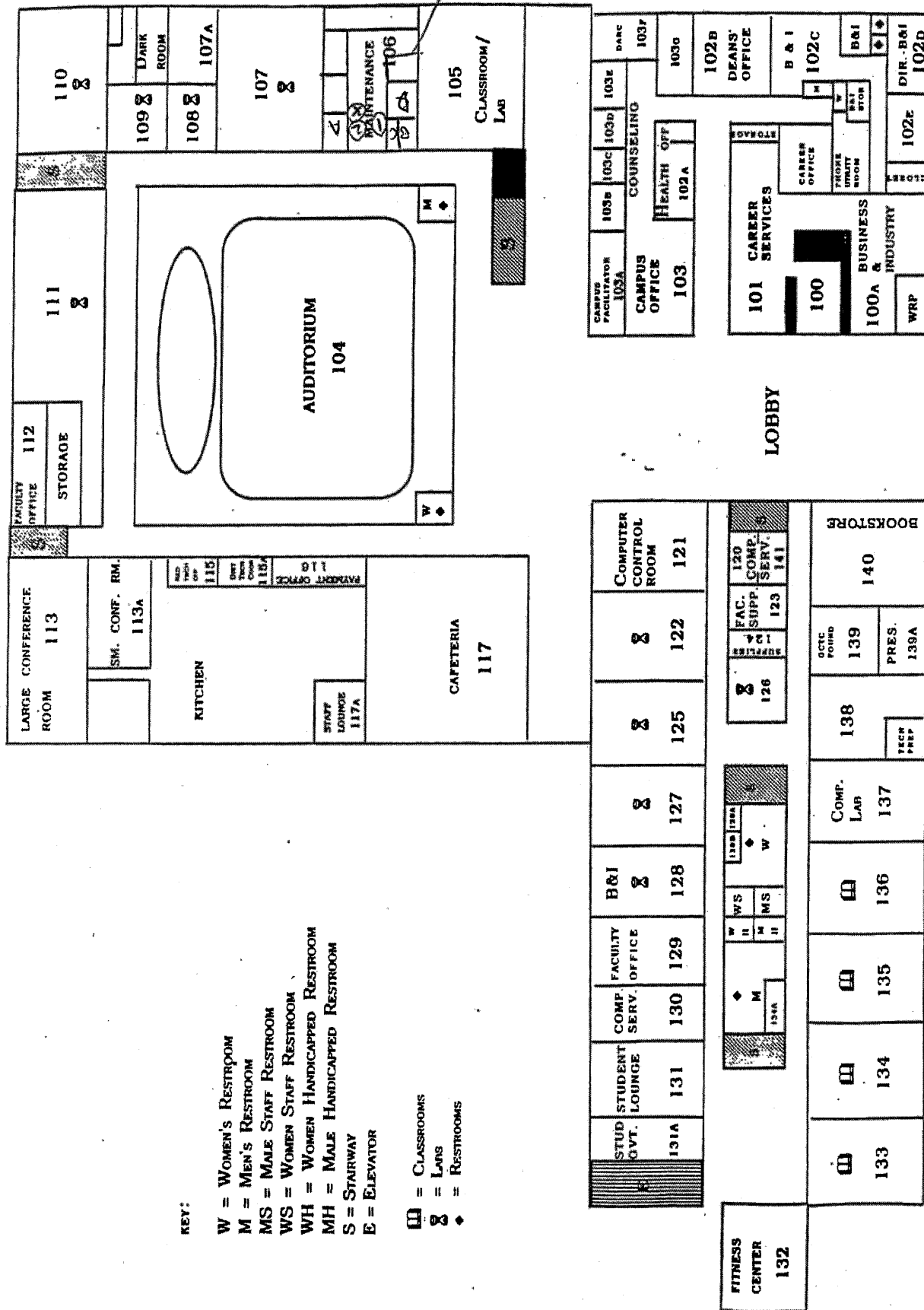
□ = CLASSROOMS  
 □ = LABS  
 ♦ = RESTROOMS



## KEY:

W = WOMEN'S RESTROOM  
 M = MEN'S RESTROOM  
 MS = MALE STAFF RESTROOM  
 WS = WOMEN STAFF RESTROOM  
 WH = WOMEN HANDICAPPED RESTROOM  
 MH = MALE HANDICAPPED RESTROOM  
 S = STAIRWAY  
 E = ELEVATOR

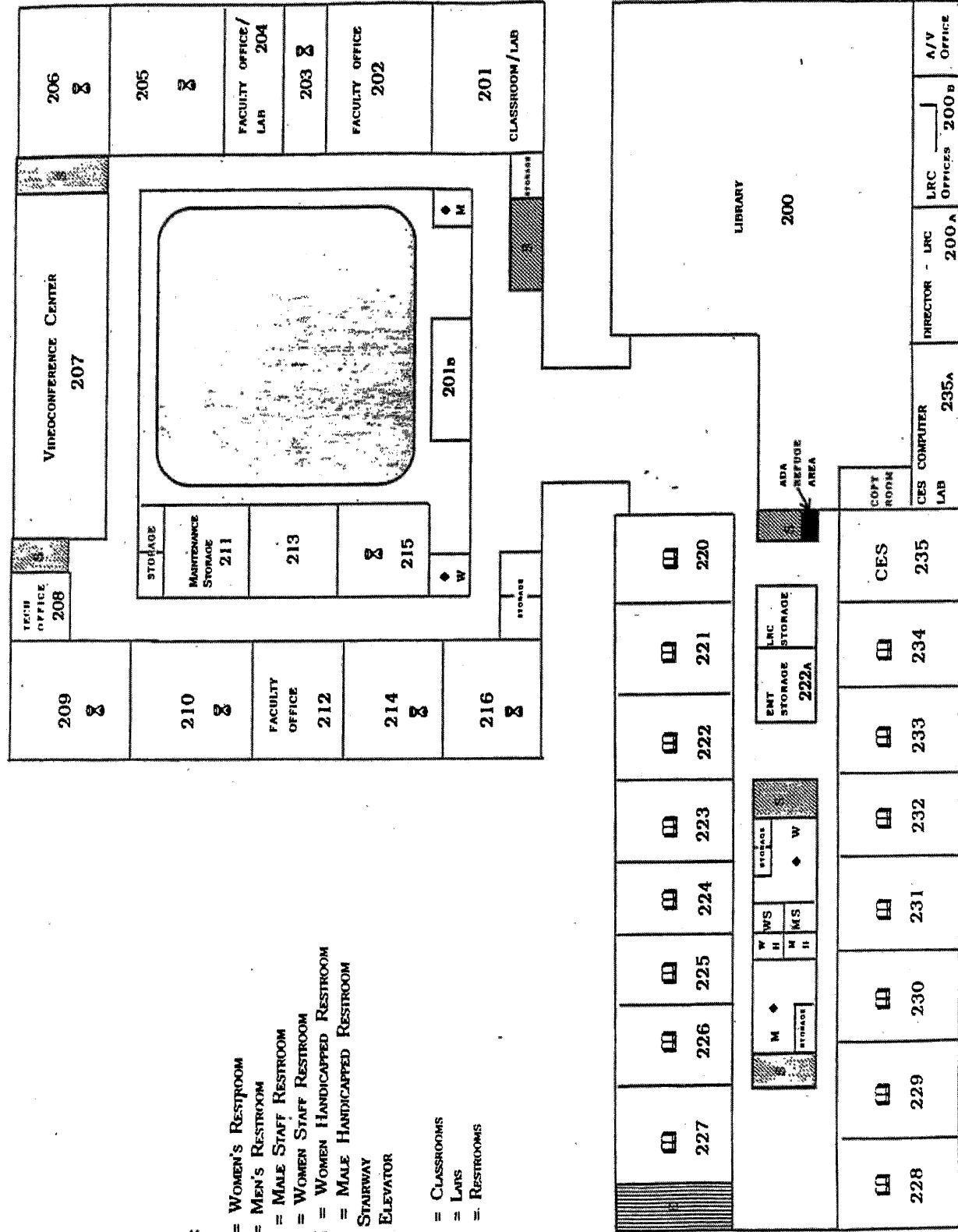
□ = CLASSROOMS  
 ⊗ = LANS  
 ◆ = RESTROOMS



KEY:

W = WOMEN'S RESTROOM  
M = MEN'S RESTROOM  
MS = MALE STAFF RESTROOM  
WS = WOMEN STAFF RESTROOM  
WH = WOMEN HANDICAPPED RESTROOM  
MH = MALE HANDICAPPED RESTROOM  
S = STAIRWAY  
E = ELEVATOR

□ = CLASSROOMS  
⊗ = LABS  
◆ = RESTROOMS



**ATTACHMENT B**

**SUMMARY TABLE**

**TABLE A: HOMOGENEOUS AREAS**

**TABLE A: HOMOGENEOUS AREAS**

**Building Name:** Wintergreen Interdistrict Magnet School - Former Gateway Community College North Haven Campus

**Building Address:** 88 Bassett Road, North Haven, Connecticut

**Building Description:** Consists of a single 162,000 square feet three-story building constructed in 1968. Originally built as a junior high school then converted to house the college and now Wintergreen Interdistrict Magnet School. The building is of concrete and steel construction and consists of classrooms, offices, an auditorium, library and cafeteria. The interior finishes in the building generally consist of vinyl floor tile or carpet over concrete floors, lay-in suspended tile ceilings and concrete block/sheetrock walls.

**Date of Inspection:** May 30, 2019

**Designated Person:** Timothy Gunn  
**Inaccessible Areas:** Above Ceilings & Behind Walls

Homogeneous Area #	Suspect Material Description	Location	Room Number	Sample ID	Sample Location	ACBM (Y/N/A)	Material Category	Total Quantity
1	12" x 12" Floor Tile-brown & Associated Mastic	Connecting Passage	SF - LBW	35	2nd Fl Conn Pass	Y	4	710 SF
		East Corridor	SF - LW	42, 45	2nd Fl Proj Booth	Y	4	1030 SF
		West Corridor	SF - LW	42, 45	2nd Fl Proj Booth	Y	4	1030 SF
		North Corridor	SF - LW	42, 45	2nd Fl Proj Booth	Y	4	1180 SF
		South Corridor	SF - LW	42, 45	2nd Fl Proj Booth	Y	5	1180 SF
		Classroom	201	42, 45	2nd Fl Proj Booth	Y	4	1220 SF
2	12" x 12" Floor Tile-tan & Associated Mastic	Projection Booth	201B	42, 45	2nd Fl Proj Booth	Y	4	110 SF
		Lab	205	42, 45	2nd Fl Proj Booth	Y	4	1220 SF
		Office	208	42, 45	2nd Fl Proj Booth	Y	4	500 SF
		Office	208C	42, 45	2nd Fl Proj Booth	Y	5	100 SF
		Office	208D	42, 45	2nd Fl Proj Booth	Y	4	100 SF
		Office	211	42, 45	2nd Fl Proj Booth	Y	5	700 SF
3	9" x 9" Floor Tile & Associated Mastic	Office	213	42, 45	2nd Fl Proj Booth	Y	5	700 SF
		Lab	215	42, 45	2nd Fl Proj Booth	Y	5	860 SF
			208A	2, 30	106, 230	Y	5	NQ
			208B	2, 30	106, 230	Y	5	NQ
		Computer Room	120	2, 30	106, 230	Y	5	120 SF
		Computer Room	130	2, 30	106, 230	Y	N/A	435 SF
4	9" x 9" Floor Tile Mastic (suspect below carpet)	Student Lounge	131	2, 30	106, 230	Y	N/A	700 SF
		Classroom	133	2, 30	106, 230	Y	N/A	740 SF
		Classroom	135	2, 30	106, 230	Y	N/A	740 SF
		Lab	137	2, 30	106, 230	Y	N/A	740 SF
		Office	138	2, 30	106, 230	Y	N/A	740 SF
		Office	139	2, 30	106, 230	Y	N/A	370 SF
5	9" x 9" Floor Tile-green & Associated Mastic	President's Office	139A	2, 30	106, 230	Y	N/A	370 SF
		Bookstore	140	2, 30	106, 230	Y	N/A	740 SF
		Computer Room	141	2, 30	106, 230	Y	N/A	120 SF
		Office	202	2, 30	106, 230	Y	N/A	1280 SF
		Vestibule	SF - LBW	2, 30	106, 230	Y	4	790 SF

**TABLE A: HOMOGENEOUS AREAS**

Homogeneous Area #	Suspect Material Description	Location	Room Number	Sample ID	Sample Location	ACBM (Y/N/A)	Material Category	Total Quantity
6	9" x 9" Floor Tile-green, red, tan & Associated Mastic	East Corridor	GF - CW	2, 30	106, 230	Y	N/A	860 SF
		West Corridor	GF - CW	2, 30	106, 230	Y	N/A	1200 SF
		North Corridor	GF - CW	2, 30	106, 230	Y	N/A	740 SF
		South Corridor	GF - CW	2, 30	106, 230	Y	N/A	350 SF
		North Corridor	FF - AW	2, 30	106, 230	Y	4	1330 SF
		West Corridor	FF - AW	2, 30	106, 230	Y	4	490 SF
		South Corridor	FF - AW	2, 30	106, 230	Y	4	1330 SF
		East Corridor	FF - LW	2, 30	106, 230	Y	4	1860 SF
		West Corridor	FF - LW	2, 30	106, 230	Y	4	1860 SF
		East Corridor	SF - CW	2, 30	106, 230	Y	4	2590 SF
6	9" x 9" Floor Tile-green, red, tan & Associated Mastic	West Corridor	SF - CW	2, 30	106, 230	Y	5	2590 SF
		Stairwell D		2, 30	106, 230	Y	4	120 SF
		Stairwell A		2, 30	106, 230	Y	4	220 SF
		Graphics Classroom	111	2, 30	106, 230	Y	4	1420 SF
		Storage	112A	2, 30	106, 230	Y	5	200 SF
		Office	112	2, 30	106, 230	Y	4	200 SF
		Lab	125	2, 30	106, 230	Y	4	740 SF
		Classroom	136	2, 30	106, 230	Y	5	740 SF
		Lab	204	2, 30	106, 230	Y	4	1220 SF
		Classroom	220	2, 30	106, 230	Y	4	740 SF
7	9" x 9" Floor Tile-light green & Associated Mastic	Classroom	221	2, 30	106, 230	Y	4	740 SF
		Classroom	225	2, 30	106, 230	Y	5	740 SF
		Classroom	227	2, 30	106, 230	Y	4	740 SF
		Classroom	228	2, 30	106, 230	Y	4	740 SF
		Classroom	233	2, 30	106, 230	Y	4	740 SF
		Classroom	234	2, 30	106, 230	Y	4	740 SF
		Office	006	2, 30	106, 230	Y	N/A	130 SF
		Toyota Lab	011	2, 30	106, 230	Y	4	1080 SF
		GM Lab	012	2, 30	106, 230	Y	5	1080 SF
		Darkrooms	FF - AW	2, 30	106, 230	Y	4	NQ
8	9" x 9" Floor Tile-light grey & Associated Mastic	Computer Room	121	2, 30	106, 230	Y	5	740 SF
		Office	123	2, 30	106, 230	Y	N/A	200 SF
		Storage	124	2, 30	106, 230	Y	N/A	245 SF
		Lab	126	2, 30	106, 230	Y	N/A	215 SF
		Lab	127	2, 30	106, 230	Y	4	740 SF
		Lab	128	2, 30	106, 230	Y	4	740 SF
			221A	2, 30	106, 230	Y	5	170 SF
		Classroom	224	2, 30	106, 230	Y	5	740 SF
		Classroom	226	2, 30	106, 230	Y	5	740 SF
		Classroom	231	2, 30	106, 230	Y	4	740 SF
9	9" x 9" Floor Tile-red/tan & Associated Mastic	Classroom	232	2, 30	106, 230	Y	4	740 SF
		Cafeteria	117	2, 30	106, 230	Y	4	2130 SF

**TABLE A: HOMOGENEOUS AREAS**

Homogeneous Area #	Suspect Material Description	Location	Room Number	Sample ID	Sample Location	ACBM (Y/N/A)	Material Category	Total Quantity
10	9" x 9" Floor Tile-tan & Associated Mastic	Classroom/Lab	010	2, 30	106, 230	Y	4	1040 SF
		Mechanical Office	FF - AOW	2, 30	106, 230	Y	5	NQ
		Phone Closet	FF - AOW	2, 30	106, 230	Y	4	NQ
		Classroom	105	2, 30	106, 230	Y	4	1500 SF
		Classroom	107	2, 30	106, 230	Y	4	1500 SF
			107C	2, 30	106, 230	Y	5	170 SF
		Classroom	110	2, 30	106, 230	Y	4	1290 SF
		Lab	122	2, 30	106, 230	Y	4	740 SF
		Storage	128A	2, 30	106, 230	Y	5	100 SF
		Storage	201A	2, 30	106, 230	Y	5	170 SF
10	9" x 9" Floor Tile-tan & Associated Mastic	Classroom	222	2, 30	106, 230	Y	4	740 SF
			222A	2, 30	106, 230	Y	5	215 SF
		Classroom	223	2, 30	106, 230	Y	4	740 SF
			224A	2, 30	106, 230	Y	5	NQ
		Classroom	229	2, 30	106, 230	Y	4	740 SF
		Classroom	230	2, 30	106, 230	Y	4	740 SF
		Classroom	235	2, 30	106, 230	Y	N/A	740 SF
		Office	129	2, 30	106, 230	Y	N/A	740 SF
		Boiler Room	GF - AW	63	Boiler Rm	Y	5	750 SF
		Old Locker Room Area	B	46	2nd Fl Proj Booth	Y	5	300 LF
11	Boiler Insulation (under jackets of 3 boilers)	Office	001	46	2nd Fl Proj Booth	Y	5	70 LF
		Men's Room	GF - CW	46	2nd Fl Proj Booth	Y	5	35 LF
		Storage	002	46	2nd Fl Proj Booth	Y	5	35 LF
		Women's Room	GF - CW	46	2nd Fl Proj Booth	Y	5	35 LF
		Classroom	003	46	2nd Fl Proj Booth	Y	5	70 LF
		Office	004	46	2nd Fl Proj Booth	Y	5	70 LF
		Office	005	46	2nd Fl Proj Booth	Y	5	70 LF
		Storage	005A	46	2nd Fl Proj Booth	Y	5	70 LF
		Office	005B	46	2nd Fl Proj Booth	Y	5	70 LF
		Office	006	46	2nd Fl Proj Booth	Y	5	35 LF
12	Door Frame Caulk	Office	007	46	2nd Fl Proj Booth	Y	4	70 LF
		Equipment Storage	007A	46	2nd Fl Proj Booth	Y	5	50 LF
		Classroom	008	46	2nd Fl Proj Booth	Y	5	70 LF
		Office	009	46	2nd Fl Proj Booth	Y	5	35 LF
		North Elevator	GF - CW	46	2nd Fl Proj Booth	Y	5	35 LF
		Classroom/Lab	010	46	2nd Fl Proj Booth	Y	4	70 SF
		Toyota Lab	011	46	2nd Fl Proj Booth	Y	5	70 LF
		GM Lab	012	46	2nd Fl Proj Booth	Y	5	35 LF
		Boiler Room	GF - AW	46	2nd Fl Proj Booth	Y	5	35 LF
		Electrical Room	GF - AW	46	2nd Fl Proj Booth	Y	5	35 LF
12	Door Frame Caulk	Men's Room	GF - AW	46	2nd Fl Proj Booth	Y	5	35 LF
		Women's Room	GF - AW	46	2nd Fl Proj Booth	Y	4	35 LF
		Auto Lab	013	46	2nd Fl Proj Booth	Y	5	200 LF



**TABLE A: HOMOGENEOUS AREAS**

Homogeneous Area #	Suspect Material Description	Location	Room Number	Sample ID	Sample Location	ACBM (Y/N/A)	Material Category	Total Quantity
12	Door Frame Caulk	Auto Lab	014	46	2nd Fl Proj Booth	Y	4	200 LF
		Health Office	102A	46	2nd Fl Proj Booth	Y	5	75 LF
		Dean's Office	102B	46	2nd Fl Proj Booth	Y	5	75 LF
		Campus Office	103A	46	2nd Fl Proj Booth	Y	5	35 LF
		Office	103B	46	2nd Fl Proj Booth	Y	5	35 LF
		Office	103C	46	2nd Fl Proj Booth	Y	4	35 LF
		Office	103D	46	2nd Fl Proj Booth	Y	5	35 LF
		Office	103E	46	2nd Fl Proj Booth	Y	5	35 LF
		Office	103F	46	2nd Fl Proj Booth	Y	5	35 LF
		Office	103G	46	2nd Fl Proj Booth	Y	5	35 LF
		North Corridor	FF - AW	46	2nd Fl Proj Booth	Y	4	50 LF
		South Corridor	FF - AW	46	2nd Fl Proj Booth	Y	5	50 LF
		Auditorium	104	46	2nd Fl Proj Booth	Y	5	300 LF
		Classroom	105	46	2nd Fl Proj Booth	Y	5	35 LF
		Maintenance	106	46	2nd Fl Proj Booth	Y	4	50 LF
		Maintenance Office	106A	46	2nd Fl Proj Booth	Y	5	35 LF
		Bathroom	106B	46	2nd Fl Proj Booth	Y	5	35 LF
		Custodian Closet	106C	46	2nd Fl Proj Booth	Y	5	35 LF
		Storage	106D	46	2nd Fl Proj Booth	Y	5	35 LF
		Classroom	107	46	2nd Fl Proj Booth	Y	5	35 LF
		Office	107A	46	2nd Fl Proj Booth	Y	5	35 LF
			107B	46	2nd Fl Proj Booth	Y	5	35 LF
			107C	46	2nd Fl Proj Booth	Y	5	35 LF
		Office	108	46	2nd Fl Proj Booth	Y	5	35 LF
		Office	109	46	2nd Fl Proj Booth	Y	5	35 LF
		Darkrooms	FF - AW	46	2nd Fl Proj Booth	Y	5	35 LF
		Classroom	110	46	2nd Fl Proj Booth	Y	5	35 LF
		Graphics Classroom	111	46	2nd Fl Proj Booth	Y	4	120 LF
		Storage	112A	46	2nd Fl Proj Booth	Y	5	50 LF
		Office	112	46	2nd Fl Proj Booth	Y	5	35 LF
		Conference Room	113	46	2nd Fl Proj Booth	Y	4	50 LF
		Conference Room	113A	46	2nd Fl Proj Booth	Y	5	35 LF
		Kitchen	FF - AW	46	2nd Fl Proj Booth	Y	4	200 LF
		Office	115	46	2nd Fl Proj Booth	Y	5	35 LF
		Office	115A	46	2nd Fl Proj Booth	Y	5	35 LF
		Office	116	46	2nd Fl Proj Booth	Y	5	35 LF
		Cafeteria	117	46	2nd Fl Proj Booth	Y	5	85 LF
		Staff Lounge	117A	46	2nd Fl Proj Booth	Y	5	35 LF
		East Corridor	FF - LW	46	2nd Fl Proj Booth	Y	5	80 LF
		West Corridor	FF - LW	46	2nd Fl Proj Booth	Y	5	80 LF
		Computer Room	120	46	2nd Fl Proj Booth	Y	5	35 LF
		Computer Room	121	46	2nd Fl Proj Booth	Y	5	35 LF
		Lab	122	46	2nd Fl Proj Booth	Y	5	35 LD

**TABLE A: HOMOGENEOUS AREAS**

Homogeneous Area #	Suspect Material Description	Location	Room Number	Sample ID	Sample Location	ACBM (Y/N/A)	Material Category	Total Quantity
12	Door Frame Caulk	Office	123	46	2nd Fl Proj Booth	Y	5	35 LF
		Storage	124	46	2nd Fl Proj Booth	Y	5	35 LF
		Lab	125	46	2nd Fl Proj Booth	Y	5	35 LF
		Lab	126	46	2nd Fl Proj Booth	Y	5	35 LF
		Lab	127	46	2nd Fl Proj Booth	Y	4	35 LF
		Lab	128	46	2nd Fl Proj Booth	Y	5	35 LF
		Storage	128A	46	2nd Fl Proj Booth	Y	5	35 LF
		Storage	128B	46	2nd Fl Proj Booth	Y	5	35 LF
		Women's Restroom	FF - LW	46	2nd Fl Proj Booth	Y	5	35 LF
		Women's Faculty	FF - LW	46	2nd Fl Proj Booth	Y	5	35 LF
		Men's Restroom	FF - LW	46	2nd Fl Proj Booth	Y	5	35 LF
		Men Faculty	FF - LW	46	2nd Fl Proj Booth	Y	5	35 LF
		Men Handicapped	FF - LW	46	2nd Fl Proj Booth	Y	5	35 LF
		Women Handicapped	FF - LW	46	2nd Fl Proj Booth	Y	5	35 LF
		Office	129	46	2nd Fl Proj Booth	Y	4	35 LF
		Computer Room	130	46	2nd Fl Proj Booth	Y	4	35 LF
		Student Lounge	131	46	2nd Fl Proj Booth	Y	5	35 LF
		Passage to Room 132	FF - LW	46	2nd Fl Proj Booth	Y	5	120 LF
		Student Activities	132	46	2nd Fl Proj Booth	Y	5	250 LF
		Classroom	133	46	2nd Fl Proj Booth	Y	4	35 LF
		Classroom	134	46	2nd Fl Proj Booth	Y	4	35 LF
		Custodian	134A	46	2nd Fl Proj Booth	Y	5	35 LF
		Classroom	135	46	2nd Fl Proj Booth	Y	5	35 LF
		Classroom	136	46	2nd Fl Proj Booth	Y	5	35 LF
		Lab	137	46	2nd Fl Proj Booth	Y	5	35 LF
		Office	138	46	2nd Fl Proj Booth	Y	5	105 LF
		Office	139	46	2nd Fl Proj Booth	Y	5	35 LF
		President's Office	139A	46	2nd Fl Proj Booth	Y	5	35 LF
		Bookstore	140	46	2nd Fl Proj Booth	Y	5	35 LF
		Computer Room	141	46	2nd Fl Proj Booth	Y	5	35 LF
		Library	200	46	2nd Fl Proj Booth	Y	5	100 LF
		Library Office	200A	46	2nd Fl Proj Booth	Y	5	35 LF
		Library Office	200B	46	2nd Fl Proj Booth	Y	5	100 LF
		Library Office	200C	46	2nd Fl Proj Booth	Y	5	35 LF
		Classroom	201	46	2nd Fl Proj Booth	Y	4	70 LF
		Storage	201A	46	2nd Fl Proj Booth	Y	5	35 LF
		Projection Booth	201B	46	2nd Fl Proj Booth	Y	5	35 LF
		Storage	201C	46	2nd Fl Proj Booth	Y	5	35 LF
		Women's Restroom	SF - LW	46	2nd Fl Proj Booth	Y	5	35 LF
		Men's Restroom	SF - LW	46	2nd Fl Proj Booth	Y	5	35 LF
		Office	202	46	2nd Fl Proj Booth	Y	5	70 LF
		Lab	203	46	2nd Fl Proj Booth	Y	5	70 LF
		Lab	204	46	2nd Fl Proj Booth	Y	5	70 LF

**TABLE A: HOMOGENEOUS AREAS**

Homogeneous Area #	Suspect Material Description	Location	Room Number	Sample ID	Sample Location	ACBM (Y/N/A)	Material Category	Total Quantity
12	Door Frame Caulk	Lab	205	46	2nd Fl Proj Booth	Y	5	70 LF
		Lab	206	46	2nd Fl Proj Booth	Y	4	35 LF
		Video Conference Center	207	46	2nd Fl Proj Booth	Y	4	105 LF
		Office	207A	46	2nd Fl Proj Booth	Y	5	35 LF
		Office	208	46	2nd Fl Proj Booth	Y	4	35 LF
			208A	46	2nd Fl Proj Booth	Y	5	35 LF
			208B	46	2nd Fl Proj Booth	Y	5	35 LF
		Office	208C	46	2nd Fl Proj Booth	Y	5	35 LF
		Office	208D	46	2nd Fl Proj Booth	Y	5	35 LF
		Lab	209	46	2nd Fl Proj Booth	Y	5	35 LF
		Lab	210	46	2nd Fl Proj Booth	Y	5	35 LF
		Office	211	46	2nd Fl Proj Booth	Y	4	35 LF
		Mechanical Room	SF - LW	46	2nd Fl Proj Booth	Y	5	35 LF
		Office	212	46	2nd Fl Proj Booth	Y	5	35 LF
		Office	213	46	2nd Fl Proj Booth	Y	4	35 LF
		Lab	214	46	2nd Fl Proj Booth	Y	5	35 LF
		Lab	215	46	2nd Fl Proj Booth	Y	5	35 LF
		Lab	216	46	2nd Fl Proj Booth	Y	5	35 LF
		Storage	216A	46	2nd Fl Proj Booth	Y	5	35 LF
		Classroom	220	46	2nd Fl Proj Booth	Y	4	35 LF
		Classroom	221	46	2nd Fl Proj Booth	Y	5	35 LF
			221A	46	2nd Fl Proj Booth	Y	5	35 LF
		Classroom	222	46	2nd Fl Proj Booth	Y	5	35 LF
			222A	46	2nd Fl Proj Booth	Y	4	35 LF
		Classroom	223	46	2nd Fl Proj Booth	Y	5	25 LF
		Classroom	224	46	2nd Fl Proj Booth	Y	5	35 LF
			224A	46	2nd Fl Proj Booth	Y	5	35 LF
			224B	46	2nd Fl Proj Booth	Y	5	35 LF
		Classroom	225	46	2nd Fl Proj Booth	Y	5	35 LF
		Classroom	226	46	2nd Fl Proj Booth	Y	4	35 LF
		Classroom	227	46	2nd Fl Proj Booth	Y	4	35 LF
		Classroom	228	46	2nd Fl Proj Booth	Y	4	35 LF
		Classroom	229	46	2nd Fl Proj Booth	Y	4	35 LF
		Classroom	230	46	2nd Fl Proj Booth	Y	5	35 LF
		Classroom	231	46	2nd Fl Proj Booth	Y	5	35 LF
		Classroom	232	46	2nd Fl Proj Booth	Y	5	35 LF
		Classroom	233	46	2nd Fl Proj Booth	Y	5	35 LF
		Classroom	234	46	2nd Fl Proj Booth	Y	4	35 LF
		Classroom	235	46	2nd Fl Proj Booth	Y	5	35 LF
		Women's Restroom	SF - CW	46	2nd Fl Proj Booth	Y	5	35 LF
		Women Faculty	SF - CW	46	2nd Fl Proj Booth	Y	5	35 LF
		Men's Restroom	SF - CW	46	2nd Fl Proj Booth	Y	5	35 LF
		Men Faculty	SF - CW	46	2nd Fl Proj Booth	Y	5	35 LF

**TABLE A: HOMOGENEOUS AREAS**

Homogeneous Area #	Suspect Material Description	Location	Room Number	Sample ID	Sample Location	ACBM (Y/N/A)	Material Category	Total Quantity
12	Door Frame Caulk	Men Handicapped	SF - CW	46	2nd Fl Proj Booth	Y	5	35 LF
		Women Handicapped	SF - CW	46	2nd Fl Proj Booth	Y	5	35 LF
		Stairwell A	-	46	2nd Fl Proj Booth	Y	5	70 LF
		Stairwell B	-	46	2nd Fl Proj Booth	Y	4	175 LF
		Stairwell C	-	46	2nd Fl Proj Booth	Y	5	240 LF
		Stairwell D	-	46	2nd Fl Proj Booth	Y	5	80 LF
		Stairwell E	-	46	2nd Fl Proj Booth	Y	4	80 LF
		Stairwell F	-	46	2nd Fl Proj Booth	Y	5	80 LF
		Mechanical Room	SF - LW		N/A	A	5	100 SF
		Classroom	134	18	134	Y	N/A	740 SF
		North Corridor	GF - CW	14	Corridor Near 107	Y	N/A	60 EA
		South Corridor	GF - CW	14	Corridor Near 107	Y	N/A	35 EA
15	Pipe Fitting Insulation	Office	001	14	Corridor Near 107	Y	N/A	10 EA
		Office	005	14	Corridor Near 107	Y	N/A	6 EA
		Office	005B	14	Corridor Near 107	Y	N/A	12 EA
		Equipment Storage	007A	14	Corridor Near 107	Y	N/A	10 EA
		Classroom	008	14	Corridor Near 107	Y	N/A	20 EA
		Toyota Lab	011	14	Corridor Near 107	Y	N/A	5 EA
		Old Locker Room Area	B	14	Corridor Near 107	Y	N/A	200 EA
		Vestibule to Auto Shops	GF - AW	14	Corridor Near 107	Y	N/A	8 EA
		Mechanical Office	FF - AOW	14	Corridor Near 107	Y	5	5 EA
		Phone Closet	FF - AOW	14	Corridor Near 107	Y	5	5 EA
		Admin. Area Corridor	FF - AOW	14	Corridor Near 107	Y	N/A	2 EA
		North Corridor	FF - AW	14	Corridor Near 107	Y	N/A	25 EA
		South Corridor	FF - AW	14	Corridor Near 107	Y	N/A	40 EA
		East Corridor	FF - AW	14	Corridor Near 107	Y	N/A	50 EA
		Office	107A	14	Corridor Near 107	Y	5	20 EA
		Classroom	110	14	Corridor Near 107	Y	5	5 EA
		Graphics Classroom	111	14	Corridor Near 107	Y	N/A	30 EA
		Kitchen	FF - AW	14	Corridor Near 107	Y	N/A	70 EA
		Cafeteria	117	14	Corridor Near 107	Y	N/A	50 EA
		East Corridor	FF - LW	14	Corridor Near 107	Y	N/A	20 EA
		West Corridor	FF - LW	14	Corridor Near 107	Y	N/A	70 EA
		Lab	125	14	Corridor Near 107	Y	N/A	10 EA
		Classroom	134	14	Corridor Near 107	Y	N/A	10 EA
		Custodian	134A	14	Corridor Near 107	Y	5	1 EA
		Classroom	135	14	Corridor Near 107	Y	5	3 EA
		Connecting Passage	SF - LBW	14	Corridor Near 107	Y	N/A	6 EA
		East Corridor	SF - LW	14	Corridor Near 107	Y	N/A	16 EA
		West Corridor	SF - LW	14	Corridor Near 107	Y	N/A	20 EA
		Storage	201A	14	Corridor Near 107	Y	5	8 EA



**TABLE A: HOMOGENEOUS AREAS**

Homogeneous Area #	Suspect Material Description	Location	Room Number	Sample ID	Sample Location	ACBM (Y/N/A)	Material Category	Total Quantity
15	Pipe Fitting Insulation	Auditorium	104	14	Corridor Near 107	Y	5	8 EA
		East Corridor	GF - CW	14	Corridor Near 107	Y	N/A	50 EA
		West Corridor	GF - CW	14	Corridor Near 107	Y	N/A	50 EA
16	Sink Undercoating-white	Lab	206	N/A	N/A	A	5	2 EA
17	Window Caulk	Office	001	23, 28	134, 230	Y	4	50 LF
		Classroom	003	23, 28	134, 230	Y	4	50 LF
		Office	004	23, 28	134, 230	Y	4	25 LF
		Office	005	23, 28	134, 230	Y	4	25 LF
		Classroom/Lab	010	23, 28	134, 230	Y	4	25 LF
		Toyota Lab	011	23, 28	134, 230	Y	4	50 LF
		GM Lab	012	23, 28	134, 230	Y	4	50 LF
		Connecting Passage	GF - AW	23, 28	134, 230	Y	4	80 LF
		Main Lobby	FF - AOW	23, 28	134, 230	Y	4	100 LF
		Business and Industry	100A	23, 28	134, 230	Y	4	25 LF
		Business and Industry	102C	23, 28	134, 230	Y	5	50 LF
		Business and Industry	102D	23, 28	134, 230	Y	5	25 LF
		Office	102E	23, 28	134, 230	Y	4	25 LF
		Office	103B	23, 28	134, 230	Y	4	50 LF
		Office	103C	23, 28	134, 230	Y	5	50 LF
		Office	103D	23, 28	134, 230	Y	5	50 LF
		Office	103E	23, 28	134, 230	Y	4	25 LF
		Office	103F	23, 28	134, 230	Y	5	50 LF
		Office	103G	23, 28	134, 230	Y	5	50 LF
		Classroom	105	23, 28	134, 230	Y	4	50 LF
		Classroom	107	23, 28	134, 230	Y	4	25 LF
		Office	107A	23, 28	134, 230	Y	5	15 LF
		Office	108	23, 28	134, 230	Y	4	25 LF
		Darkrooms	FF - AW	23, 28	134, 230	Y	4	25 LF
		Classroom	110	23, 28	134, 230	Y	4	50 LF
		Graphics Classroom	111	23, 28	134, 230	Y	4	25 LF
		Office	112	23, 28	134, 230	Y	4	25 LF
		Conference Room	113	23, 28	134, 230	Y	4	120 LF
		Cafeteria	117	23, 28	134, 230	Y	4	120 LF
		Staff Lounge	117A	23, 28	134, 230	Y	4	25 LF
		Computer Room	121	23, 28	134, 230	Y	5	25 LF
		Lab	122	23, 28	134, 230	Y	4	50 LF
		Lab	125	23, 28	134, 230	Y	5	25 LF
		Lab	127	23, 28	134, 230	Y	4	25 LF
		Lab	128	23, 28	134, 230	Y	4	25 LF
		Office	129	23, 28	134, 230	Y	4	25 LF
		Computer Room	130	23, 28	134, 230	Y	4	25 LF
		Student Lounge	131	23, 28	134, 230	Y	4	50 LF
		Classroom	133	23, 28	134, 230	Y	4	25 LF

**TABLE A: HOMOGENEOUS AREAS**

Homogeneous Area #	Suspect Material Description	Location	Room Number	Sample ID	Sample Location	ACBM (Y/N/A)	Material Category	Total Quantity
17	Window Caulk	Classroom	134	23, 28	134, 230	Y	4	50 LF
		Classroom	135	23, 28	134, 230	Y	4	25 LF
		Classroom	136	23, 28	134, 230	Y	4	25 LF
		Lab	137	23, 28	134, 230	Y	4	25 LF
		Office	138	23, 28	134, 230	Y	4	25 LF
		President's Office	139A	23, 28	134, 230	Y	4	50 LF
		Bookstore	140	23, 28	134, 230	Y	4	50 LF
		Connecting Passage	SF - LBW	23, 28	134, 230	Y	4	200 LF
		Library	200	23, 28	134, 230	Y	4	200 LF
		Library Office	200A	23, 28	134, 230	Y	5	NQ
		Library Office	200B	23, 28	134, 230	Y	5	NQ
		Library Office	200D	23, 28	134, 230	Y	5	NQ
		East Corridor	SF - LW	23, 28	134, 230	Y	4	50 LF
		Classroom	201	23, 28	134, 230	Y	4	80 LF
		Office	202	23, 28	134, 230	Y	4	70 LF
		Lab	203	23, 28	134, 230	Y	4	70 LF
		Lab	204	23, 28	134, 230	Y		70 LF
		Lab	205	23, 28	134, 230	Y	4	25 LF
		Lab	206	23, 28	134, 230	Y	4	50 LF
		Video Conference Center	207	23, 28	134, 230	Y	4	50 LF
		Lab	209	23, 28	134, 230	Y	4	25 LF
		Lab	210	23, 28	134, 230	Y	4	25 LF
		Office	212	23, 28	134, 230	Y	4	60 LF
		Lab	214	23, 28	134, 230	Y	4	25 LF
		Lab	216	23, 28	134, 230	Y	4	25 LF
		Classroom	220	23, 28	134, 230	Y	4	25 LF
		Classroom	221	23, 28	134, 230	Y	4	25 LF
		Classroom	222	23, 28	134, 230	Y	4	25 LF
		Classroom	223	23, 28	134, 230	Y	4	25 LF
		Classroom	224	23, 28	134, 230	Y	4	25 LF
		Classroom	225	23, 28	134, 230	Y	4	25 LF
		Classroom	226	23, 28	134, 230	Y	4	50 LF
		Classroom	227	23, 28	134, 230	Y	4	25 LF
		Classroom	228	23, 28	134, 230	Y	4	25 LF
		Classroom	229	23, 28	134, 230	Y	4	25 LF
		Classroom	230	23, 28	134, 230	Y	4	25 LF
		Classroom	231	23, 28	134, 230	Y	4	25 LF
		Classroom	232	23, 28	134, 230	Y	4	25 LF
		Classroom	233	23, 28	134, 230	Y	4	25 LF

TABLE A: HOMOGENEOUS AREAS

Homogeneous Area #	Suspect Material Description	Location	Room Number	Sample ID	Sample Location	ACBM (Y/N/A)	Material Category	Total Quantity
17	Window Caulk	Classroom	234	23, 28	134, 230	Y	4	25 LF
		Classroom	235	23, 28	134, 230	Y	4	25 LF
		Stairwell E	-	23, 28	134, 230	Y	4	80 LF
		Stairwell F	-	23, 28	134, 230	Y	4	80 LF
<p align="center"><b>KEY</b></p> <p><b>Material Category Codes:</b> TSI = Thermal System Insulation, SURF = Surfacing, MISC = Miscellaneous</p> <p><b>Asbestos-Containing Building Materials Codes:</b> Y= Yes, N= No, A= Assumed</p> <p>B = Basement, GF - CW = Ground Floor - Classroom Wing, GF - AW = Ground Floor - Auto Shop Wing, FF - AOW = First Floor - Admin. Office Wing, FF - AW = First Floor - Auditorium Wing, FF - LW = First Floor - Laboratory Wing, SF - LBW = Second Floor - Library Wing, SF - LW = Second Floor - Lab Wing, SF - CW = Second Floor - Classroom Wing</p>								
<p><b>Quantity Codes:</b> LF = Linear Feet, SF = Square Feet</p> <p><b>General Code:</b> NA = Not Applicable, NQ = Not Quantified</p>								
<p>Inspector's Name: Taylor Carfiro</p> <p>Inspector's Signature: </p> <p>Accreditation #/State: 004037/CT</p> <p>Expiration Date: December 31, 2019</p>								
<p>Management Planner Name: Ashis Roychowdhury</p> <p>Management Planner Signature: </p> <p>Accreditation # / State: 000108/CT</p> <p>Expiration Date: March 31, 2019</p>								
<p>I, the LEA's Designated Person, have read and understood the recommendations made above:</p>								
Signature								Date

**TABLE B: FUNCTIONAL SPACES**



**TABLE B: FUNCTIONAL SPACES**

**Building Name:** Wintergreen Interdistrict Magnet School (Former Gateway Community College North Haven Campus)  
**Building Address:** 88 Bassett Road, North Haven, Connecticut  
**Building Description:** Consists of a single 162,000 square foot three-story building constructed in 1968. Originally built as a junior high school then converted to house the college and now to be used as Wintergreen Interdistrict Magnet School. The building is of concrete and steel construction and consists of classrooms, offices, an auditorium, library and cafeteria. The interior finishes in the building generally consist of vinyl floor tile or carpet over concrete floors, lay-in suspended tile ceilings and concrete block/sheetrock walls.

**Date of Inspection:** May 30 & 31, 2019  
**Designated Person:** Timothy Gunn  
**Inaccessible Areas:** Above Ceilings & Behind Walls

INSPECTOR'S FINDINGS				MANAGEMENT PLANNER'S RECOMMENDATIONS				
Location	Room Number	Suspect Material Description	Material Category (TSI/SURF/MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action
BASEMENT								
Old Locker Room Area	-	Pipe Fitting Insulation (above plaster ceiling)	TSI	F	200 EA	N/A	N/A	Inaccessible to assess. Maintain Under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	300 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
GROUND FLOOR - CLASSROOM WING								
East Corridor	023	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	NF	860 SF	N/A	N/A	Inaccessible to assess. Under new laminate flooring which is intact & in good condition. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Pipe Fitting Insulation (above suspended ceiling)	TSI	F	50 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
West Corridor	024	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	NF	1200 SF	N/A	N/A	Inaccessible to assess. Under new laminate flooring is intact & in good condition. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Pipe Fitting Insulation (above suspended ceiling)	TSI	F	50 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
North Corridor	025	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	NF	740 SF	N/A	N/A	Inaccessible to assess. Under new 12" x 12" floor tile. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Pipe Fitting Insulation	TSI	F	60 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures

**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS					MANAGEMENT PLANNER'S RECOMMENDATIONS			
Location	Room Number	Suspect Material Description	Material Category (TSI/SURF/MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action
<b>GROUND FLOOR - CLASSROOM WING</b>								
South Corridor	026	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	NF	350 SF	N/A	N/A	Inaccessible to assess. Under new 12" x 12" floor tile. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Pipe Fitting Insulation	TSI	F	35 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	001	Pipe Fitting Insulation	TSI	F	10 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Window Caulk	MISC	NF	50 LF	D	4	15 LF cracking/missing. Remove and replace with non-ACM caulk.
Men's Room	015	Door Frame Caulk	MISC	NF	70 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Storage	002	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Women's Room	016	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Classroom	003	Window Caulk	MISC	NF	50 LF	D	4	30 LF cracking. Remove and replace with non-ACM caulk.
		Door Frame Caulk	MISC	NF	70 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	004	Window Caulk	MISC	NF	25 LF	SD		15 LF cracking. Replace with non-ACM materials.
		Door Frame Caulk	MISC	NF	70 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	005	Pipe Fitting Insulation	TSI	F	6 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Window Caulk	MISC	NF	25 LF	D	4	10 SF cracking. Remove and replace with non-ACM caulk.
		Door Frame Caulk	MISC	NF	70 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Storage	005A	Door Frame Caulk	MISC	NF	70 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures

**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS					MANAGEMENT PLANNER'S RECOMMENDATIONS			
Location	Room Number	Suspect Material Description	Material Category (TSI/SURF/MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action
<b>GROUND FLOOR - CLASSROOM WING</b>								
Office	005B	Pipe Fitting Insulation	TSI	F	12 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	70 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	006	9" x 9" Floor Tile-light green & Associated Mastic (under carpet)	MISC	NF	130 SF	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	007	Door Frame Caulk	MISC	NF	70 LF	D	4	2 LF cracking/missing. Remove & replace with non-ACM caulk.
Equipment Storage	007A	Pipe Fitting Insulation	TSI	F	10 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	50 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Classroom	008	Pipe Fitting Insulation	TSI	F	20 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	70 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	009	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
North Elevator	017	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Classroom/Lab	010	9" x 9" Floor Tile-tan & Associated Mastic	MISC	NF	1040 SF	D	4	5 Tiles chipped exposing mastic. Repair using non-ACM epoxy.
		Window Caulk	MISC	NF	25 LF	SD	4	15 LF cracking/missing. Remove and replace with non-ACM caulk.
		Door Frame Caulk	MISC	NF	70 SF	D	4	4 LF cracking/missing. Remove & replace with non-ACM caulk.

**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS					MANAGEMENT PLANNER'S RECOMMENDATIONS			
Location	Room Number	Suspect Material Description	Material Category (TSI/SURF/MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action
<b>GROUND FLOOR - CLASSROOM WING</b>								
Toyota Lab	011	Pipe Fitting Insulation	TSI	F	5 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		9" x 9" Floor Tile-light grey & Associated Mastic	MISC	NF	1080 SF	D	4	10 Tiles cracking/missing exposing mastic. Repair using non-ACM epoxy.
		Window Caulk	MISC	NF	50 LF	D	4	20 LF cracking. Remove and replace with non- ACM caulk.
		Door Frame Caulk	MISC	NF	70 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
GM Lab	012	9" x 9" Floor Tile-light grey & Associated Mastic	MISC	NF	1080 SF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Window Caulk	MISC	NF	50 LF	SD	4	25 LF cracking. Remove and replace with non- ACM caulk.
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Window Caulk	MISC	NF	80 LF	SD	4	50 LF cracking. Remove and replace with non- ACM caulk.
Connecting Passage	018							
Vestibule to Auto Shops	019	Pipe Fitting Insulation	TSI	F	8 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Boiler Room	020	Boiler Insulation (under jackets of 3 boilers)	TSI	F	750 SF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Electrical Room	013A	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Men's Room	021	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Women's Room	022	Door Frame Caulk	MISC	NF	35 LF	D	4	15 LF cracking/missing. Remove and replace with non- ACM caulk.
Auto Lab	013	Door Frame Caulk	MISC	NF	200 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Auto Lab	014	Door Frame Caulk	MISC	NF	200 LF	D	4	20 LF cracking. Remove and replace with non- ACM caulk.

**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS					MANAGEMENT PLANNER'S RECOMMENDATIONS			
Location	Room Number	Suspect Material Description	Material Category (TSI/SURF/MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action
<b>FIRST FLOOR - ADMIN. OFFICE WING</b>								
Main Lobby	142	Window Caulk	MISC	NF	100 LF	D	4	40 LF cracking. Remove and replace with non- ACM caulk.
Business and Industry	100A	Window Caulk	MISC	NF	25 LF	SD	4	20 LF cracking. Remove and replace with non- ACM caulk.
Mechanical Office	143	Pipe Fitting Insulation	TSI	F	5 EA	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		9" x 9" Floor Tile-tan & Associated Mastic	MISC	NF	NQ	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Phone Closet	144	Pipe Fitting Insulation	TSI	F	5 EA	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		9" x 9" Floor Tile-tan & Associated Mastic	MISC	NF	NQ	D	4	2 SF dents/chips. Repair the damage using non-ACM epoxy.
Health Office	102A	Door Frame Caulk	MISC	NF	75 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Dean's Office	102B	Door Frame Caulk	MISC	NF	75 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Business and Industry	102C	Window Caulk	MISC	NF	50 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Business and Industry	102D	Window Caulk	MISC	NF	25 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	102E	Window Caulk	MISC	NF	25 LF	SD	4	20 LF cracking. Remove and replace with non- ACM caulk.
Campus Office	103A	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	103B	Window Caulk	MISC	NF	50 LF	D	4	8 LF cracking. Remove and replace with non- ACM caulk.
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	103C	Window Caulk	MISC	NF	50 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	35 LF	D	4	2 LF cracking. Remove & replace with non- ACM caulk.
Office	103D	Window Caulk	MISC	NF	50 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures

**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS					MANAGEMENT PLANNER'S RECOMMENDATIONS			
Location	Room Number	Suspect Material Description	Material Category (TSI/SURF/MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action
<b>FIRST FLOOR - ADMIN. OFFICE WING</b>								
Office	103E	Window Caulk	MISC	NF	25 LF	D	4	10 LF cracking. Remove and replace with non- ACM materials.
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	103F	Window Caulk	MISC	NF	50 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	103G	Window Caulk	MISC	NF	50 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Admin. Area Corridor	145	Pipe Fitting Insulation	TSI	F	2 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
<b>FIRST FLOOR - AUDITORIUM WING</b>								
North Corridor	146	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	NF	1330 SF	D	4	5 Tiles chipped exposing mastic. Repair using non-ACM epoxy.
		Pipe Fitting Insulation	TSI	F	25 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	50 LF	D	4	2 LF cracking. Remove & replace with non- ACM caulk.
West Corridor	147	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	NF	490 SF	D	4	8 Tiles cracking. Repair the damage using non-ACM epoxy.
South Corridor	148	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	NF	1330 SF	D	4	6 Tiles cracking and 6 tiles missing exposing mastic. Repair the cracked tiles using epoxy. Cover the exposed mastic by new non-ACM tiles.
		Door Frame Caulk	MISC	NF	50 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
East Corridor	149	Pipe Fitting Insulation	TSI	F	40 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Pipe Fitting Insulation	TSI	F	50 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures

**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS							MANAGEMENT PLANNER'S RECOMMENDATIONS			
Location	Room Number	Suspect Material Description	Material Category (TSI/SURF/MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action		
FIRST FLOOR - AUDITORIUM WING										
Auditorium	104	Pipe Fitting Insulation (8 small fittings along stage back wall)	TSI	F	8 EA	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
		Door Frame Caulk	MISC	NF	300 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Classroom	105	9" x 9" Floor Tile-tan & Associated Mastic	MISC	NF	1500 SF	D	4	20 Tiles chipped/holes exposing mastic. Remove the damaged materials and replace by new non-ACM tiles and mastic. Tile that are only chipped but have no exposed mastic can be repaired using non-ACM epoxy		
		Window Caulk	MISC	NF	50 LF	SD	4	40 LF cracking. Remove and replace with non- ACM materials.		
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Maintenance	106	Door Frame Caulk	MISC	NF	50 LF	D	4	20 LF missing/cracking. Remove and replace with non-ACM materials.		
Maintenance Office	106A	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Bathroom	106B	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Custodian Closet	106C	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Storage	106D	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Classroom	107	9" x 9" Floor Tile-tan & Associated Mastic	MISC	NF	1500 SF	D	4	< 1 SF chips/cracks. Repair the damage using non-ACM epoxy.		
		Window Caulk	MISC	NF	25 LF	SD	4	20 LF cracking. Remove and replace with non- ACM caulk.		
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Office	107A	Window Caulk	MISC	NF	15 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
		Pipe Fitting Insulation	TSI	F	20 EA	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Office	107B	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		

**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS								MANAGEMENT PLANNER'S RECOMMENDATIONS			
Location	Room Number	Suspect Material Description	Material Category (TSI/SURF/MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action			
FIRST FLOOR - AUDITORIUM WING											
Office	107C	9" x 9" Floor Tile-tan & Associated Mastic	MISC	NF	170 SF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures			
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures			
Office	108	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures			
		Window Caulk	MISC	NF	25 LF	D	4	10 LF cracking. Remove and replace with non- ACM materials.			
Office	109	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures			
Darkrooms	150	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures			
		Window Caulk	MISC	NF	25 LF	SD	4	The entire caulk is cracking. Remove and replace with non- ACM materials.			
		9" x 9" Floor Tile-light grey & Associated Mastic	MISC	NF	NQ	D	4	Loose tiles. Monitor the condition & if the condition deteriorates remove & replace with non- ACM tile and mastic.			
Classroom	110	9" x 9" Floor Tile-tan & Associated Mastic	MISC	NF	1290 SF	D	4	6 SF chipped/cracked/missing exposing mastic. Remove the damaged tiles and replace by new non-ACM tiles and mastic.			
		Window Caulk	MISC	NF	50 LF	D	4	20 LF cracking. Remove and replace with non- ACM materials.			
		Pipe Fitting Insulation	TSI	F	5 EA	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures			
Graphics Classroom	111	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures			
		9" x 9" Floor Tile-light green & Associated Mastic	MISC	NF	1420 SF	D	4	15 Tiles chipped/missing exposing mastic. Remove the damaged tiles and replace by new non-ACM tiles and mastic.			
		Window Caulk	MISC	NF	25 LF	SD	4	20 LF cracking. Remove and replace with non- ACM materials.			
		Pipe Fitting Insulation	TSI	F	30 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures			
		Door Frame Caulk	MISC	NF	120 LF	D	4	2 LF cracking. Remove & replace with non- ACM caulk.			



**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS					MANAGEMENT PLANNER'S RECOMMENDATIONS			
Location	Room Number	Suspect Material Description	Material Category (TSI/SURF/MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action
<b>FIRST FLOOR - AUDITORIUM WING</b>								
Storage	112A	9" x 9" Floor Tile-light green & Associated Mastic	MISC	NF	200 SF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	50 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	112	9" x 9" Floor Tile-light green & Associated Mastic	MISC	NF	200 SF	D	4	3 SF missing/chipped exposing mastic. Repair using non-ACM epoxy.
		Window Caulk	MISC	NF	25 LF	SD	4	20 LF cracking. Remove and replace with non-ACM caulk.
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Conference Room	113	Window Caulk	MISC	NF	120 LF	SD	4	50 LF cracking. Remove and replace with non-ACM caulk.
		Door Frame Caulk	MISC	NF	50 LF	D	4	10 LF cracking. Remove and replace with non-ACM caulk.
Conference Room	113A	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Kitchen	151	Pipe Fitting Insulation	TSI	F	70 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	200 LF	D	4	15 LF missing/cracking. Remove and replace with non-ACM materials.
Office	115	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	115A	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	116	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Cafeteria	117	9" x 9" Floor Tile-red/tan & Associated Mastic	MISC	NF	2130 SF	D	4	65 Tiles cracking/missing exposing mastic. Remove the damaged tiles and replace by new non-ACM tiles and mastic.
		Window Caulk	MISC	NF	120 LF	SD	4	The entire caulk is cracking. Remove and replace with non-ACM caulk.
		Pipe Fitting Insulation	TSI	F	50 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	85 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures

**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS							MANAGEMENT PLANNER'S RECOMMENDATIONS			
Location	Room Number	Suspect Material Description	Material Category (TSI/SURF/MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action		
FIRST FLOOR - AUDITORIUM WING										
Staff Lounge	117A	Window Caulk	MISC	NF	25 LF	SD	4	20 LF cracking. Remove and replace with non- ACM materials.		
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
FIRST FLOOR - LABORATORY WING										
East Corridor	152	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	NF	1860 SF	D	4	3 Tiles chipped exposing mastic. Repair using non-ACM epoxy.		
		Pipe Fitting Insulation	TSI	F	20 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
		Door Frame Caulk	MISC	NF	80 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
West Corridor	153	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	NF	1860 SF	D	4	5 Tiles chipped exposing mastic. Repair using non-ACM epoxy.		
		Pipe Fitting Insulation	TSI	F	70 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
		Door Frame Caulk	MISC	NF	80 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Computer Room	120	Floor Tile Mastic (assumed to exist below carpet)	MISC	NF	120 SF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Computer Room	121	9" x 9" Floor Tile-light grey & Associated Mastic	MISC	NF	740 SF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
		Window Caulk	MISC	NF	25 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Lab	122	9" x 9" Floor Tile-tan & Associated Mastic	MISC	NF	740 SF	D	4	5 SF missing. Remove the mastic where the tiles are missing and cover by new by new non-ACM tiles and mastic.		
		Window Caulk	MISC	NF	50 LF	SD	4	The entire caulk is cracking. Remove and replace with non- ACM materials.		
		Door Frame Caulk	MISC	NF	35 LD	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		

**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS							MANAGEMENT PLANNER'S RECOMMENDATIONS			
Location	Room Number	Suspect Material Description	Material Category (TSI/SURF/MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action		
FIRST FLOOR - LABORATORY WING										
Office	123	9" x 9" Floor Tile-light grey & Associated Mastic	MISC	NF	200 SF	N/A	N/A	Inaccessible to assess. Carpet intact & in good condition. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Storage	124	9" x 9" Floor Tile-light grey & Associated Mastic	MISC	NF	245 SF	N/A	N/A	Inaccessible to assess. Carpet intact. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Lab	125	9" x 9" Floor Tile-light green & Associated Mastic	MISC	NF	740 SF	D	4	2 SF chipped/cracking. Repair the damage using non-ACM epoxy.		
		Window Caulk	MISC	NF	25 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
		Pipe Fitting Insulation	TSI	F	10 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Lab	126	9" x 9" Floor Tile-light grey & Associated Mastic	MISC	NF	215 SF	N/A	N/A	Inaccessible to assess. Carpet intact. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Lab	127	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
		9" x 9" Floor Tile-light grey & Associated Mastic	MISC	NF	740 SF	D	4	4 SF chipped/cracking. Repair the damage using non-ACM epoxy.		
		Window Caulk	MISC	NF	25 LF	SD	4	The entire caulk is cracking. Remove and replace by non-ACM caulk.		
Lab	128	Door Frame Caulk	MISC	NF	35 LF	D	4	5 LF missing/cracking. Remove & replace with non-ACM caulk.		
		9" x 9" Floor Tile-light grey & Associated Mastic	MISC	NF	740 SF	D	4	< 1 SF dents/chips exposing mastic. Repair the damage using non-ACM epoxy.		
		Window Caulk	MISC	NF	25 LF	SD	4	The entire caulk is cracking. Remove and replace with non-ACM materials.		
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		

**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS							MANAGEMENT PLANNER'S RECOMMENDATIONS		
Location	Room Number	Suspect Material Description	Material Category (TSI/SURF/MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action	
FIRST FLOOR - LABORATORY WING									
Storage	128A	9" x 9" Floor Tile-tan & Associated Mastic	MISC	NF	100 SF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures	
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures	
Storage	128B	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures	
Women's Restroom	154	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures	
Women's Faculty	155	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures	
Men's Restroom	156	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures	
Men Faculty	157	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures	
Men Handicapped	158	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures	
Women Handicapped	159	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures	
Office	129	9" x 9" Floor Tile-tan & Associated Mastic (possibly under carpet)	MISC	NF	740 SF	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures	
		Window Caulk	MISC	NF	25 LF	SD	4	The entire caulk is cracking. Remove and replace with non- ACM caulk.	
		Door Frame Caulk	MISC	NF	35 LF	D	4	4 LF missing/cracking. Remove & replace with non- ACM caulk.	
Computer Room	130	9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	NF	435 SF	N/A	N/A	Inaccessible to assess. Carpet intact. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures	
		Window Caulk	MISC	NF	25 LF	SD	4	25 LF cracking. Remove and replace with non- ACM caulk.	
		Door Frame Caulk	MISC	NF	35 LF	D	4	2 LF cracking. Remove & replace with non- ACM caulk.	

**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS					MANAGEMENT PLANNER'S RECOMMENDATIONS			
Location	Room Number	Suspect Material Description	Material Category (TSI/SURF/MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action
<b>FIRST FLOOR - LABORATORY WING</b>								
Student Lounge	131	9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	NF	700 SF	N/A	N/A	Inaccessible to assess. Carpet intact. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Window Caulk	MISC	NF	50 LF	SD	4	The entire caulk is cracking. Remove and replace with non- ACM caulk.
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Passage to Room 132		Door Frame Caulk	MISC	NF	120 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Student Activities	132	Door Frame Caulk	MISC	NF	250 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Classroom	133	9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	NF	740 SF	N/A	N/A	Inaccessible to assess. Carpet intact. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Window Caulk	MISC	NF	25 LF	SD	4	The entire caulk is cracking. Remove and replace with non- ACM caulk.
		Door Frame Caulk	MISC	NF	35 LF	D	4	< 1 LF cracking. Repair with spackling compound.
Classroom	134	Window Caulk	MISC	NF	50 LF	SD	4	40 LF missing/cracking. Remove and replace with non- ACM caulk.
		Old Floor Tile Mastic (under levelastic)	MISC	NF	740 SF	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Pipe Fitting Insulation	TSI	F	10 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Custodian	134A	Door Frame Caulk	MISC	NF	35 LF	D	4	4 LF missing/cracking. Remove & replace with non- ACM caulk.
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Pipe Fitting Insulation	TSI	NF	1 EA	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Classroom	135	9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	NF	740 SF	N/A	N/A	Inaccessible to assess. Carpet damaged. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Window Caulk	MISC	NF	25 LF	SD	4	The entire caulk is cracking. Remove and replace with non- ACM caulk.

**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS					MANAGEMENT PLANNER'S RECOMMENDATIONS			
Location	Room Number	Suspect Material Description	Material Category (TSI/SURF/MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	ASHERA Assessment Category	Recommended Response Action
<b>FIRST FLOOR - LABORATORY WING</b>								
Classroom	135	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Pipe Fitting Insulation	TSI	F	3 EA	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Classroom	136	9" x 9" Floor Tile-light green & Associated Mastic	MISC	NF	740 SF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Window Caulk	MISC	NF	25 LF	SD	4	20 LF cracking. Remove and Replace with non- ACM caulk.
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Lab	137	9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	NF	740 SF	N/A	N/A	Inaccessible to assess. Carpet intact. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Window Caulk	MISC	NF	25 LF	SD	4	20 LF cracking. Remove and replace with non- ACM caulk.
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	138	9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	NF	740 SF	N/A	N/A	Inaccessible to assess. Carpet damaged. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Window Caulk	MISC	NF	25 LF	SD	4	20 LF cracking. Remove and replace with non- ACM caulk.
		Door Frame Caulk	MISC	NF	105 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	139	9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	NF	370 SF	N/A	N/A	Inaccessible to assess. Carpet intact. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	NF	370 SF	N/A	N/A	Inaccessible to assess. Carpet intact. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
President's Office	139A	Window Caulk	MISC	NF	50 LF	SD	4	The entire caulk is cracking. Remove and replace with non- ACM caulk.
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures

**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS					MANAGEMENT PLANNER'S RECOMMENDATIONS			
Location	Room Number	Suspect Material Description	Material Category (TSI/SURF/MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action
FIRST FLOOR - LABORATORY WING								
Bookstore	140	9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	NF	740 SF	N/A	N/A	Inaccessible to assess. Carpet intact. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Window Caulk	MISC	NF	50 LF	SD	4	The entire caulk is cracking. Replace with non-ACM caulk.
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Computer Room	141	9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	NF	120 SF	N/A	N/A	Inaccessible to assess.
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
SECOND FLOOR - LIBRARY WING								
Vestibule	236	9" x 9" Floor Tile-green & Associated Mastic	MISC	NF	790 SF	D	4	1 Tiles missing exposing mastic, 1 tile loose. Remove the damaged materials and replace by new non-ACM tiles and mastic.
Connecting Passage	237	12" x 12" Floor Tile-brown & Associated Mastic	MISC	NF	710 SF	D	4	20 Tiles cracking/chipping/loose. Remove the damaged tiles/mastic and replace by new non-ACM tiles and mastic.
		Window Caulk	MISC	NF	200 LF	SD	4	70 LF cracking. Remove and replace with non-ACM caulk.
		Pipe Fitting Insulation	TSI	F	6 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Library	200	Window Caulk	MISC	NF	200 LF	D	4	20 LF cracking. Remove and replace with non-ACM caulk.
		Door Frame Caulk	MISC	NF	100 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Library Office	200A	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Window Caulk	MISC	NF	NQ	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Library Office	200B	Door Frame Caulk	MISC	NF	100 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Window Caulk	MISC	NF	NQ	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures

**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS					MANAGEMENT PLANNER'S RECOMMENDATIONS			
Location	Room Number	Suspect Material Description	Material Category (TSI/SURF/MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action
SECOND FLOOR - LIBRARY WING								
Library Office	200C	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Library Office	200D	Window Caulk	MISC	NF	NQ	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
SECOND FLOOR - LAB WING								
East Corridor	238	12" x 12" Floor Tile-tan & Associated Mastic	MISC	NF	1030 SF	D	4	< 1 SF chips/dents. Repair the damage using non-ACM epoxy.
		Window Caulk	MISC	NF	50 LF	SD	4	40 LF cracking. Remove and replace with non- ACM caulk.
		Pipe Fitting Insulation	MISC	F	16 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
West Corridor	239	12" x 12" Floor Tile-tan & Associated Mastic	MISC	NF	1030 SF	D	4	30 SF water damage. Monitor the condition. Remove if the condition deteriorates and replace by new non-ACM tiles and mastic.
		Pipe Fitting Insulation	TSI	F	20 EA	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
North Corridor	240	12" x 12" Floor Tile-tan & Associated Mastic	MISC	NF	1180 SF	D	4	< 1 SF chips/dents. Repair the damage using non-ACM epoxy.
South Corridor	241	12" x 12" Floor Tile-tan & Associated Mastic	MISC	NF	1180 SF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Window Caulk	MISC	NF	80 LF	SD	4	60 LF cracking. Remove and replace with non- ACM caulk.
Classroom	201	12" x 12" Floor Tile-tan & Associated Mastic	MISC	NF	1220 SF	D	4	< 1 SF chips/dents. Repair the damage using non-ACM epoxy.
		Door Frame Caulk	MISC	NF	70 LF	D	4	5 LF cracking. Remove & replace with non- ACM caulk.
		9" x 9" Floor Tile-tan & Associated Mastic	MISC	NF	170 SF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Storage	201A	Pipe Fitting Insulation	TSI	F	8 EA	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures



**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS					MANAGEMENT PLANNER'S RECOMMENDATIONS			
Location	Room Number	Suspect Material Description	Material Category (TSL/SURF/MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action
<b>SECOND FLOOR - LAB WING</b>								
Projection Booth	201B	12" x 12" Floor Tile-tan & Associated Mastic	MISC	NF	110 SF	D	4	1 Tile missing, 2 tiles loose. Cover the exposed spot with new non-ACM tile. Adhere the loose tile with epoxy.
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Storage	201C	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Women's Restroom		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Men's Restroom		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	202	9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	NF	1280 SF	N/A	N/A	Inaccessible to assess. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Window Caulk	MISC	NF	70 LF	SD	4	60 LF cracking. Replace with non- ACM materials.
		Door Frame Caulk	MISC	NF	70 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Lab	203	Window Caulk	MISC	NF	70 LF	SD	4	60 LF cracking. Remove and replace with non- ACM caulk.
		Door Frame Caulk	MISC	NF	70 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Lab	204	Window Caulk	MISC	NF	70 LF	SD	4	60 LF cracking. Remove and replace with non- ACM caulk.
		9" x 9" Floor Tile-light green & Associated Mastic	MISC	NF	1220 SF	D	4	< 1 SF chips/dents. Repair the damage using non-ACM epoxy.
		Door Frame Caulk	MISC	NF	70 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Lab	205	12" x 12" Floor Tile-tan & Associated Mastic	MISC	NF	1220 SF	D	4	2 SF holes/chips exposing mastic. Repair the damage using non-ACM epoxy.
		Window Caulk	MISC	NF	25 LF	SD	4	The entire caulk is cracking. Remove and replace with non- ACM caulk.
		Door Frame Caulk	MISC	NF	70 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures

**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS					MANAGEMENT PLANNER'S RECOMMENDATIONS			
Location	Room Number	Suspect Material Description	Material Category (TISI/SURF/MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action
<b>SECOND FLOOR - LAB WING</b>								
Lab	206	Window Caulk	MISC	NF	50 LF	SD	4	The entire caulk is cracking. Remove and replace with non- ACM caulk.
		Door Frame Caulk	MISC	NF	35 LF	D	4	4 LF cracking/missing. Remove & replace with non- ACM caulk.
		Sink Undercoating-white	MISC	NF	2 EA	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Video Conference Center	207	Window Caulk	MISC	NF	50 LF	SD	4	40 LF cracking. Remove and replace with non- ACM caulk.
		Door Frame Caulk	MISC	NF	105 LF	D	4	15 LF missing/cracking. Remove & replace with non- ACM caulk.
Office	207A	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	208	12" x 12" Floor Tile-tan & Associated Mastic	MISC	NF	500 SF	D	4	< 1 SF chips/dents. Repair the damage using non-ACM epoxy.
		Door Frame Caulk	MISC	NF	35 LF	D	4	15 SF cracking/missing. Remove and replace with non- ACM caulk.
Storage	208A	9" x 9" Floor Tile & Associated Mastic	MISC	NF	NQ	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Storage	208B	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		9" x 9" Floor Tile & Associated Mastic	MISC	NF	NQ	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	208C	12" x 12" Floor Tile-tan & Associated Mastic	MISC	NF	100 SF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	208D	12" x 12" Floor Tile-tan & Associated Mastic	MISC	NF	100 SF	D	4	< 1 SF chipped. Repair the damage using non-ACM epoxy.
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Lab	209	Window Caulk	MISC	NF	25 LF	SD	4	The entire caulk is cracking. Remove and replace with non- ACM caulk.
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures

**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS					MANAGEMENT PLANNER'S RECOMMENDATIONS			
Location	Room Number	Suspect Material Description	Material Category (TSI/SURF/MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action
<b>SECOND FLOOR - LAB WING</b>								
Lab	210	Window Caulk	MISC	NF	25 LF	SD	4	The entire caulk is cracking. Replace with non- ACM caulk.
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	211	12" x 12" Floor Tile-tan & Associated Mastic	MISC	NF	700 SF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	35 LF	D	4	2 LF missing/cracking. Remove & replace with non- ACM caulk.
Mechanical Room	244	Duct Insulation	TSI	F	100 SF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	212	Window Caulk	MISC	NF	60 LF	SD	4	50 LF cracking. Remove and replace with non- ACM materials.
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Office	213	12" x 12" Floor Tile-tan & Associated Mastic	MISC	NF	700 SF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	35 LF	D	4	15 LF missing/cracking. Remove and replace with non- ACM caulk.
Lab	214	Window Caulk	MISC	NF	25 LF	SD	4	The entire caulk is cracking. Remove and replace with non- ACM caulk.
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Lab	215	12" x 12" Floor Tile-tan & Associated Mastic	MISC	NF	860 SF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Lab	216	Window Caulk	MISC	NF	25 LF	SD	4	15 LF cracking. Remove and replace with non- ACM materials.
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Storage	216A	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures

**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS							MANAGEMENT PLANNER'S RECOMMENDATIONS			
Location	Room Number	Suspect Material Description	Material Category (TSI/SURF/MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action		
SECOND FLOOR - CLASSROOM WING										
East Corridor	245	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	NF	2590 SF	D	4	< 1 SF chips/dents. Repair the damage using non-ACM epoxy.		
West Corridor	246	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	NF	2590 SF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Classroom	220	9" x 9" Floor Tile-light green & Associated Mastic	MISC	NF	740 SF	D	4	< 1 SF chips/dents. Repair the damage using non-ACM epoxy.		
		Window Caulk	MISC	NF	25 LF	SD	4	20 LF cracking. Remove and replace with non- ACM caulk.		
		Door Frame Caulk	MISC	NF	35 LF	D	4	5 LF cracking/missing. Remove & replace with non- ACM caulk.		
Classroom	221	9" x 9" Floor Tile-light green & Associated Mastic	MISC	NF	740 SF	D	4	< 1 SF chips/dents. Repair the damage using non-ACM epoxy.		
Storage	221A	Window Caulk	MISC	NF	25 LF	SD	4	20 LF cracking. Replace with non- ACM materials.		
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
		9" x 9" Floor Tile-light grey & Associated Mastic	MISC	NF	170 SF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Classroom	222	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
		9" x 9" Floor Tile-tan & Associated Mastic	MISC	NF	740 SF	D	4	1 Tile missing, 2 tiles chipped exposing mastic. Cover the mastic where the tile is missing by new non-ACM tile. Repair the damaged tile by non-ACM epoxy..		
		Window Caulk	MISC	NF	25 LF	SD	4	25 LF cracking. Remove and replace with non- ACM caulk.		
Storage	222A	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
		9" x 9" Floor Tile-tan & Associated Mastic	MISC	NF	215 SF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
		Door Frame Caulk	MISC	NF	35 LF	D	4	4 LF cracking/missing. Remove & replace with non- ACM caulk.		
Classroom	223	9" x 9" Floor Tile-tan & Associated Mastic	MISC	NF	740 SF	D	4	1 Tile missing, 4 tiles chipped exposing mastic. Cover the space where the tile is missing by new non-ACM tile. Repair the chipped tile by non-ACM epoxy.		
Classroom	223	Window Caulk	MISC	NF	25 LF	SD	4	20 LF cracking. Remove and replace with non- ACM caulk.		
		Door Frame Caulk	MISC	NF	25 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		

**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS							MANAGEMENT PLANNER'S RECOMMENDATIONS			
Location	Room Number	Suspect Material Description	Material Category (TSI/SURF/MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action		
SECOND FLOOR - CLASSROOM WING										
Classroom	224	9" x 9" Floor Tile-light grey & Associated Mastic	MISC	NF	740 SF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
		Window Caulk	MISC	NF	25 LF	SD	4	20 LF cracking. Replace with non- ACM materials.		
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Storage	224A	9" x 9" Floor Tile-tan & Associated Mastic	MISC	NF	NQ	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Storage	224B	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Classroom	225	9" x 9" Floor Tile-light green & Associated Mastic	MISC	NF	740 SF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
		Window Caulk	MISC	NF	25 LF	SD	4	The entire caulk is cracking. Remove and replace with non- ACM caulk.		
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Classroom	226	9" x 9" Floor Tile-light grey & Associated Mastic	MISC	NF	740 SF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
		Window Caulk	MISC	NF	50 LF	SD	4	20 LF cracking. Remove and replace with non- ACM caulk.		
		Door Frame Caulk	MISC	NF	35 LF	D	4	4 LF cracking/missing. Remove & replace with non- ACM caulk.		
Classroom	227	9" x 9" Floor Tile-light green & Associated Mastic	MISC	NF	740 SF	D	4	7 Tiles missing by radiator. Remove the residual mastic and cover by new non-ACM tile and mastic.		
		Window Caulk	MISC	NF	25 LF	SD	4	20 LF cracking. Remove and replace with non- ACM caulk.		
		Door Frame Caulk	MISC	NF	35 LF	D	4	4 LF cracking/missing. Remove & replace with non- ACM caulk.		
Classroom	228	9" x 9" Floor Tile-light green & Associated Mastic	MISC	NF	740 SF	D	4	< 1 SF chipped, 2 tiles missing exposing mastic. Repair the chipped tile with epoxy. Remove the residual mastic and cover by new non-ACM tiles and mastic.		
		Window Caulk	MISC	NF	25 LF	SD	4	15 LF cracking. Remove and replace with non- ACM caulk.		
		Door Frame Caulk	MISC	NF	35 LF	D	4	5 LF cracking. Remove & replace with non- ACM caulk.		

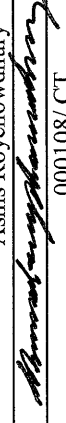
**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS							MANAGEMENT PLANNER'S RECOMMENDATIONS			
Location	Room Number	Suspect Material Description	Material Category (TSI/SURF/ MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action		
SECOND FLOOR - CLASSROOM WING										
Classroom	229	9" x 9" Floor Tile-tan & Associated Mastic	MISC	NF	740 SF	D	4	< 1 SF chipped exposing mastic. Repair the damage using non-ACM epoxy.		
		Window Caulk	MISC	NF	25 LF	SD	4	15 LF cracking. Replace with non- ACM materials.		
		Door Frame Caulk	MISC	NF	35 LF	D	4	4 LF cracking/missing. Remove & replace with non-ACM caulk.		
Classroom	230	9" x 9" Floor Tile-tan & Associated Mastic	MISC	NF	740 SF	D	4	< 1 SF chipped exposing mastic. Repair the damage using non-ACM epoxy.		
		Window Caulk	MISC	NF	25 LF	SD	4	The entire caulk is cracking. Remove and replace with non- ACM caulk.		
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Classroom	231	9" x 9" Floor Tile-light grey & Associated Mastic	MISC	NF	740 SF	D	4	< 1 SF dents/cracks. Repair the damage using non-ACM epoxy.		
		Window Caulk	MISC	NF	25 LF	SD	4	15 LF cracking. Remove and replace with non- ACM caulk.		
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Classroom	232	9" x 9" Floor Tile-light grey & Associated Mastic	MISC	NF	740 SF	D	4	< 1 SF dents/cracks. Repair the damage using non-ACM epoxy.		
		Window Caulk	MISC	NF	25 LF	SD	4	15 LF cracking. Remove and replace with non- ACM materials.		
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Classroom	233	9" x 9" Floor Tile-light green & Associated Mastic	MISC	NF	740 SF	D	4	< 1 SF dents/cracks. Repair the damage using non-ACM epoxy.		
		Window Caulk	MISC	NF	25 LF	SD	4	15 LF cracking. Remove and replace with non- ACM materials.		
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures		
Classroom	234	9" x 9" Floor Tile-light green & Associated Mastic	MISC	NF	740 SF	D	4	< 1 SF dents/cracks. Repair the damage using non-ACM epoxy.		
		Window Caulk	MISC	NF	25 LF	SD	4	15 LF cracking. Remove and replace with non- ACM caulk.		
		Door Frame Caulk	MISC	NF	35 LF	D	4	4 LF missing/cracking. Remove & replace with non-ACM caulk.		

**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS					MANAGEMENT PLANNER'S RECOMMENDATIONS			
Location	Room Number	Suspect Material Description	Material Category (TISI/SURF/MISC)	Friability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action
<b>SECOND FLOOR - CLASSROOM WING</b>								
Classroom	235	9" x 9" Floor Tile-tan & Associated Mastic	MISC	NF	740 SF	N/A	N/A	Inaccessible to assess. Carpet intact. Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
		Window Caulk	MISC	NF	25 LF	SD	4	15 LF cracking. Remove and replace with non- ACM caulk.
		Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Women's Restroom	247	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Women Faculty	249	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Men's Restroom	248	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Men Faculty	250	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Men Handicapped	252	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Women Handicapped	251	Door Frame Caulk	MISC	NF	35 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
<b>STAIRWELLS</b>								
Stairwell A	-	9" x 9" Floor Tile-green, red, tan & Associated Mastic (first floor landing only)	MISC	NF	220 SF	D	4	1 Tile missing exposing mastic. Remove the residual mastic and cover by new non-ACM tile and mastic.
		Door Frame Caulk	MISC	NF	70 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Stairwell B	-	Door Frame Caulk	MISC	NF	175 LF	D	4	6 LF missing/cracking. Remove & replace with non- ACM caulk.
Stairwell C	-	Door Frame Caulk	MISC	NF	240 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Stairwell D	-	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	NF	120 SF	D	4	4 Tiles missing exposing mastic. Remove the residual mastic and cover by new non-ACM tile and mastic.
		Door Frame Caulk	MISC	NF	80 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
Stairwell E	-	Window Caulk	MISC	NF	80 LF	SD	4	80 LF cracking. Remove and replace with non- ACM caulk.
		Door Frame Caulk	MISC	NF	80 LF	D	4	2 LF cracking/missing. Remove & replace with non- ACM caulk.

**TABLE B: FUNCTIONAL SPACES**

INSPECTOR'S FINDINGS				MANAGEMENT PLANNER'S RECOMMENDATIONS				
Location	Room Number	Suspect Material Description	Material Category (TSI/SURF/MISC)	Irriability (F/NF)	Total Quantity (LF/SF)	Condition (G/D/SD)	AHERA Assessment Category	Recommended Response Action
<b>STAIRWELLS</b>								
Stairwell F	-	Window Caulk	MISC	NF	80 LF	SD	4	80 LF cracking. Remove and replace with non- ACM caulk.
		Door Frame Caulk	MISC	NF	80 LF	G	5	Maintain under Operations & Maintenance Plan. Follow Preventative Measure Procedures
<b>KEY</b>								
<b>Material Category Codes:</b> TSI = Thermal System Insulation, SURF = Surfacing, MISC = Miscellaneous <b>Condition Codes:</b> G = Good, D = Damaged, SD = Significantly Damaged								
Inspector's Name:			<b>Quantity Codes:</b> LF = Linear Feet, SF = Square Feet, EA = Each <b>General Code:</b> NA = Not Applicable, NQ = Not Quantified					
Inspector's Signature:			Management Planner Name: Ashis Roychowdhury					
Accreditation #/State:			Management Planner Signature: 					
Expiration Date:			Accreditation #/State: 000108/ CT					
			Expiration Date: March 31, 2020					
I, the LEA's Designated Person, have read and understood the recommendations made above: <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div>Signature</div> <div>Date</div> </div>								



**ATTACHMENT C**

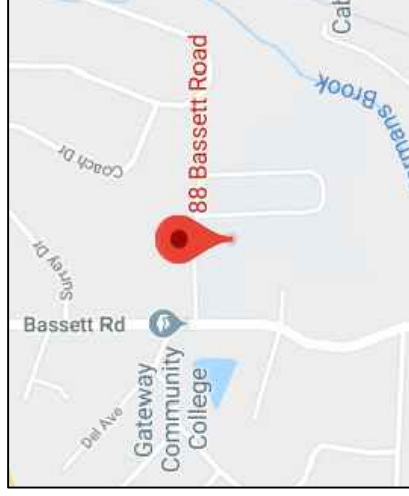
**FLOOR PLAN AND SAMPLE LOCATION DIAGRAM**

# AREA COOPERATIVE EDUCATIONAL SERVICES (ACES) WINTERGREEN INTERDISTRICT MAGNET SCHOOL

88 BASSETT ROAD  
NORTH HAVEN, CONNECTICUT  
EAGLE PROJECT NUMBER: 19-139.10T1

<u>INDEX OF DRAWINGS</u>	
BP-1	BASEMENT FLOOR
FP-1	FIRST FLOOR
FP-2	SECOND FLOOR

## LOCATION PLAN



AUGUST 1, 2019



**EAGLE**  
Environmental, Inc.

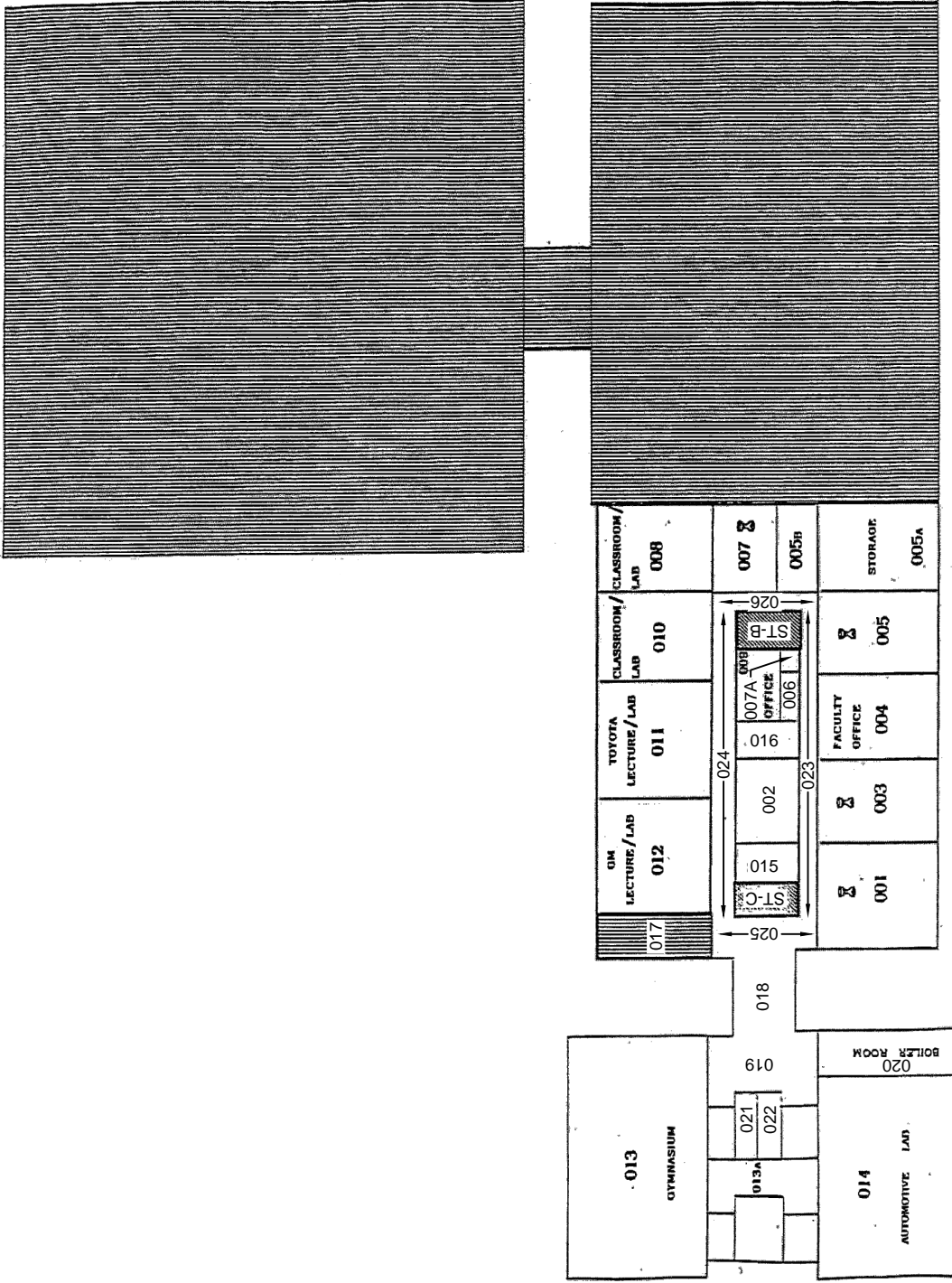
8 SOUTH MAIN STREET, SUITE 3  
TERRYVILLE, CONNECTICUT 06786  
860-589-8257

WEST (SIDE-C)



NORTH (SIDE-D)

SOUTH (SIDE-B)



## BASEMENT FLOOR

NOT TO SCALE

EAST (SIDE-A)



**EAGLE**  
Environmental, Inc.

8 SOUTH MAIN STREET, SUITE 3  
TERRYVILLE, CONNECTICUT 06786  
860-589-8257

INITIAL AHERA  
AREA COOPERATIVE EDUCATIONAL SERVICES (ACES)  
WINTERGREEN INTERDISTRICT MAGNET SCHOOL  
88 BASSETT ROAD  
NORTH HAVEN, CONNECTICUT

DATE: 08/01/2019  
PROJECT NO.: 19-139.10T1  
DRAWN BY: BB  
REVIEWED BY: AR

SHEET NO.

**BP-1**

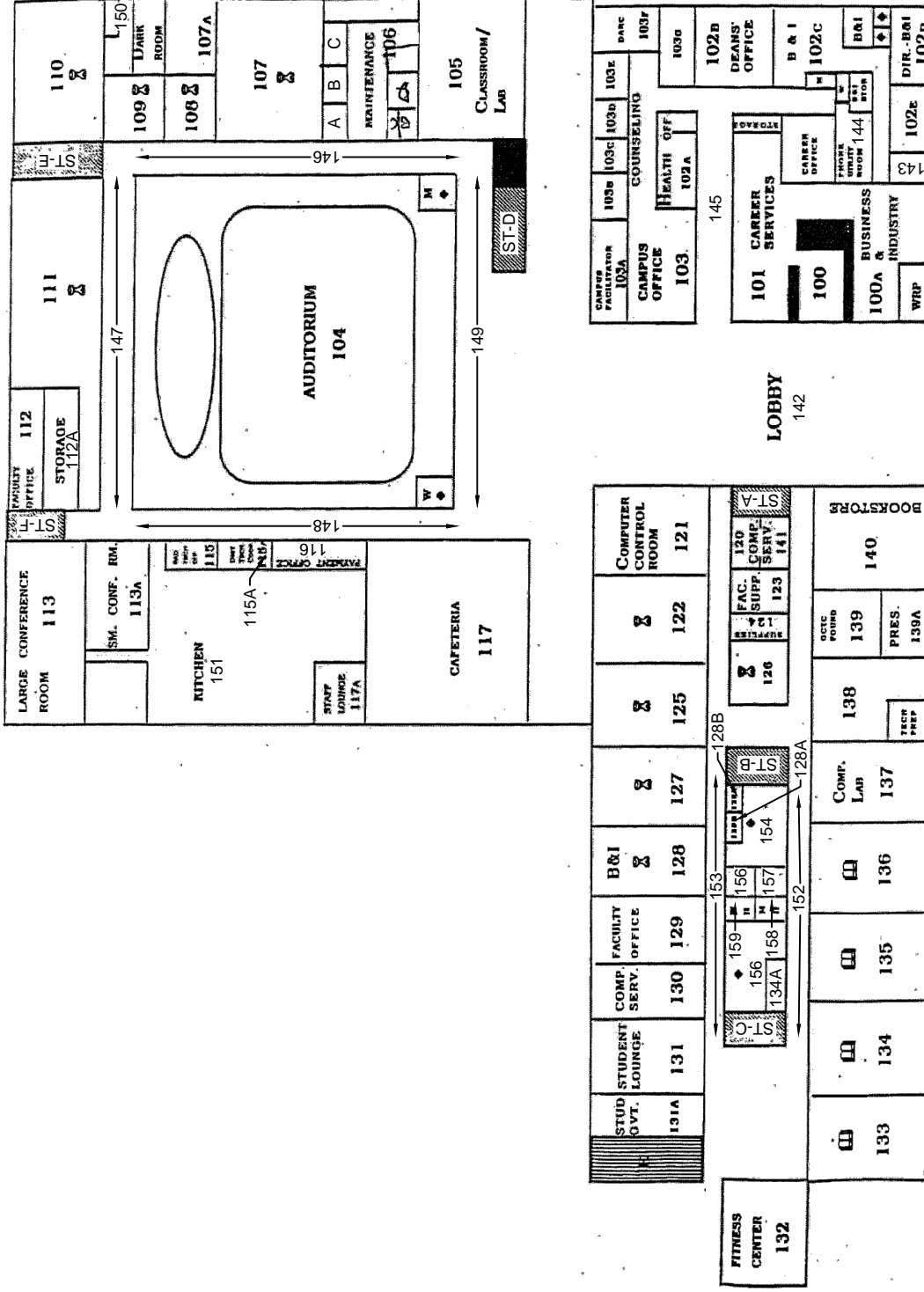
SHEET 1 OF 3

WEST (SIDE-C)



NORTH (SIDE-D)

SOUTH (SIDE-B)



## FIRST FLOOR

NOT TO SCALE

EAST (SIDE-A)



**EAGLE**  
Environmental, Inc.

8 SOUTH MAIN STREET, SUITE 3  
TERRYVILLE, CONNECTICUT 06786  
860-589-8257

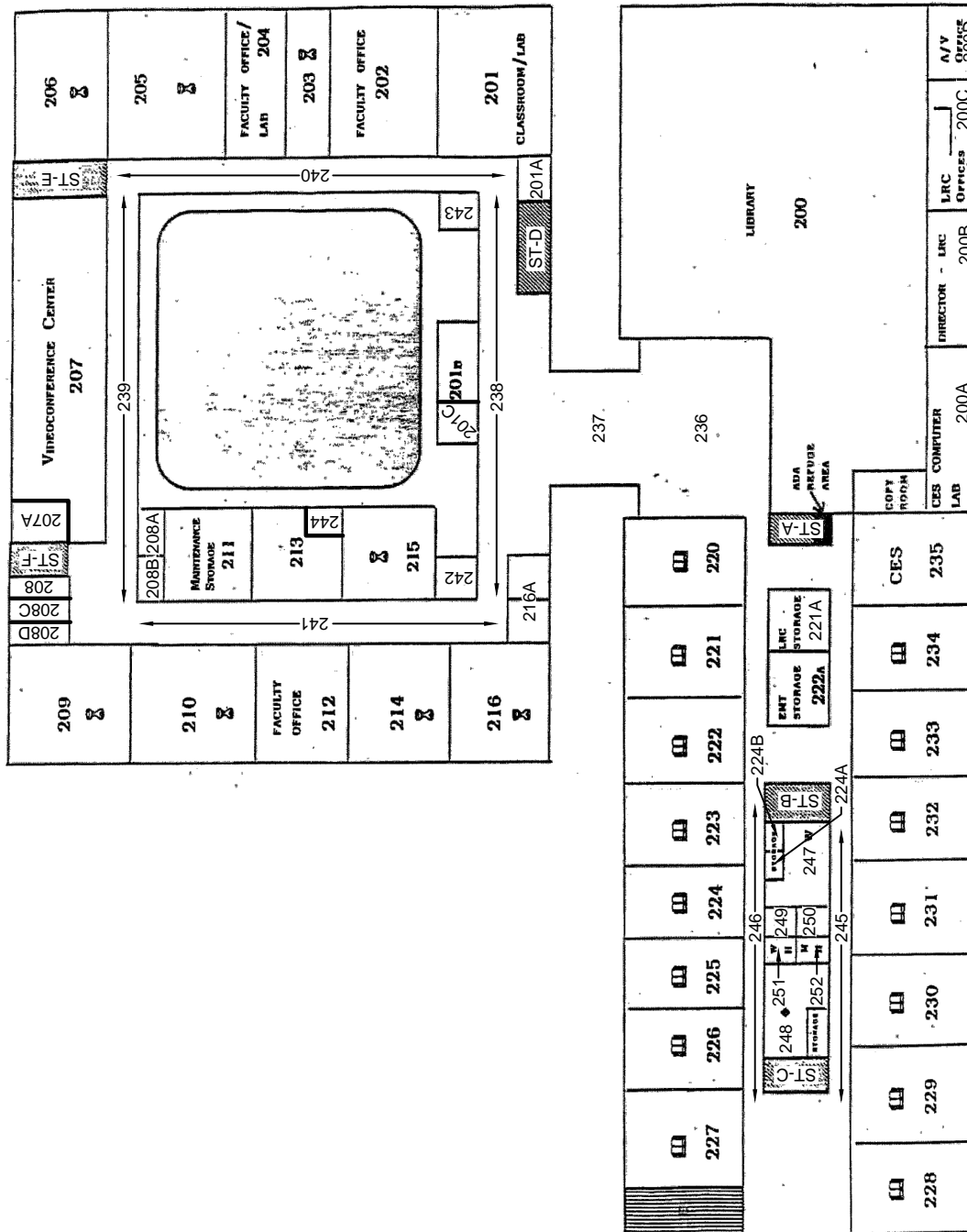
**INITIAL AHERA**  
**AREA COOPERATIVE EDUCATIONAL SERVICES (ACES)**  
WINTERGREEN INTERDISTRICT MAGNET SCHOOL  
88 BASSETT ROAD  
NORTH HAVEN, CONNECTICUT

DATE: 08/01/2019  
PROJECT NO.: 19-139,10T1  
DRAWN BY: BB  
REVIEWED BY: AR

**SHEET NO.**  
**FP-1**  
SHEET 2 OF 3

NORTH (SIDE-D)

WEST (SIDE-C)



## SECOND FLOOR

NOT TO SCALE

EAST (SIDE-A)

SOUTH (SIDE-B)



**EAGLE**  
Environmental, Inc.

8 SOUTH MAIN STREET, SUITE 3  
TERRYVILLE, CONNECTICUT 06786  
860-589-8257

z:\2019 files\2019 autocad\aces\wintergreen intermediate magnet school\initial ahera\cad198 bassett road.dwg

**INITIAL AHERA**  
**AREA COOPERATIVE EDUCATIONAL SERVICES (ACES)**  
WINTERGREEN INTERDISTRICT MAGNET SCHOOL  
88 BASSETT ROAD  
NORTH HAVEN, CONNECTICUT

DATE: 08/01/2019

PROJECT NO.: 19-139.10T1

DRAWN BY: BB

REVIEWED BY: AR

**SHEET NO.**

# FP-2

SHEET 3 OF 3

**ATTACHMENT D**  
**BULK SAMPLE RESULTS**





## Chain of Custody

EMSL Order Number  
(Lab Use Only):  
Additional Analysis Request  
EMSL Order Number

041914839

☐ EMSL CT☒ EMSL NYC☒ EMSL Corporate

29 N. Plains Hwy, # 4  
Wallingford, CT 06492  
Phone: 203-284-5948

307 West 38th Street  
New York, NY 10018  
Phone: 212-290-0051

200 Route 130 North  
Cinnaminson, NJ 08077  
Phone: 800-220-3675

Eagle Environmental, Inc.	EMSL Acct # EEVM50	Project Manager: AR	Proj #: 19-139.10T1
8 South Main Street, Suite 3, Terryville, CT 06786		Project: ACES - WIMS - 88 Bassett Rd, North Haven	
Report To: Brandy LeBlanc	Phone: 860-589-8257	US State Collected: CT	CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt
Email All Results to: <input checked="" type="checkbox"/> bleblanc@eagleenviro.com	Samples Collected by (Name): Taylor Carfiro		Date(s) Collected: 5/31/19
<input checked="" type="checkbox"/> rsioch@eagleenviro.com <input checked="" type="checkbox"/> tpoitras@eagleenviro.com		Signature:	
Additional Contacts to Receive Email Results:			
<input type="checkbox"/> Verbal Results: Contact Name and Phone #:			

**Turnaround Time (TAT) Options - Please Check Box Below <24 HR TAT's Call Ahead to Confirm Lab Availability.**  
Not all TAT options are valid for every test (7402, PLM NOB & 400 PC w/Gravimetric Reduction, TEM NOB, Culturable Fungi)

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☒ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

Based on the turnaround time selected above, it is our belief that results are due on or before this Date & Time:

Asbestos	Lead (Pb) Flame Atomic Absorption	Microbiology
<b>TEM: Air</b> <input type="checkbox"/> 4 - 4.5 Hour Turnaround Time (AHERA ONLY) <input type="checkbox"/> AHERA 40 CFR, Part 763, Sub E <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <b>PLM: Bulk</b> <input checked="" type="checkbox"/> 600/R-93/116 <input type="checkbox"/> PLM NOB w/Gravimetric Reduction <input type="checkbox"/> 400 Point Count <input type="checkbox"/> 400 Point Count w/Gravimetric Reduction <b>TEM: Bulk</b> <input type="checkbox"/> TEM EPA NOB <b>TEM: Dust</b> <input type="checkbox"/> ASTM Microvac <input type="checkbox"/> ASTM Wipe <input type="checkbox"/> Qualitative <b>Other:</b>	<input type="checkbox"/> <b>Air: NIOSH 7082</b> RL: 4µg/filter <input type="checkbox"/> <b>Soil: SW846-7000B</b> RL: 40 mg/kg (ppm) <b>Chips: SW846-7000B</b> RL: 0.01% <input type="checkbox"/> % by weight <input type="checkbox"/> mg/cm <sup>2</sup> <input type="checkbox"/> ppm <b>Wipe: SW846-7000B</b> RL: 10 µg/wipe <input type="checkbox"/> ASTM <input type="checkbox"/> non ASTM <small>Assumed non ASTM if no box is checked</small> <b>Other:</b>	<b>Air Samples</b> <input type="checkbox"/> Fungi (Spore Trap) Allergenco-D <b>Test: M032</b> <input type="checkbox"/> Fungi Culturable Genus Level ID <b>Test: M005</b> <b>Swab, Tape Lift, Bulk Samples</b> <input type="checkbox"/> Mold & Fungi Direct Exam <b>Test: M041</b> <input type="checkbox"/> Fungi Culturable <b>Test: M007</b> (No Tape Lifts) <b>Other:</b>

## Eagle Lab Instructions/Comments:

Asbestos: Air - Do Not Analyze Outsides or Blanks Unless Authorized by Eagle Bulk - Please Stop on First Positive Within Sets

Lead:

Microbiology:

Sample #	I/O HA#	Sample Description	Sample Location	Volume (L) Area Sampled	Date/Time Sampled
05-31-TC-01		6" Cove base-black	117		
05-31-TC-02		6" Cove base-black	220		
05-31-TC-03		6" Cove base-grey	113		
05-31-TC-04		6" Cove base-grey	113		
05-31-TC-05		6" Cove base-maroon	133		
05-31-TC-06		6" Cove base-maroon	134		
05-31-TC-07		4" Cove base-black	140		
05-31-TC-08		4" Cove base-black	141		
05-31-TC-09		4" Cove base-maroon	200		
05-31-TC-10		4" Cove base-maroon	113A		
05-31-TC-11		Tackboard adhesive-yellow	113A		
05-31-TC-12		Tackboard adhesive-yellow	200A		
05-31-TC-13		Bottom layer plaster on concrete-white	207		
05-31-TC-14		Bottom layer plaster on concrete-white	207		
05-31-TC-15		Top layer skim coat on plaster-white	207		
05-31-TC-16		Top layer skim coat on plaster-white	207		

Client Sample #'s	05-31-TC-01 - 180	Total # of Samples:	160
Relinquished (Client):	<i>[Signature]</i>	Date:	5/31/19
Received (Lab):		Date:	
Relinquished:	<i>[Signature]</i>	Date:	5/31/19
Received:	<i>[Signature]</i> - FedEx	Date:	6/1/19

Time: 2:50

Time:

Time: PM

Time: 10:15A

(16)





# EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-5974

<http://www.EMSL.com> / [cinnasblab@EMSL.com](mailto:cinnasblab@EMSL.com)

EMSL Order: 041914839

Customer ID: EEVM50

Customer PO:

Project ID:

**Attention:** Brandy LeBlanc  
Eagle Environmental, Inc. - CT  
8 South Main Street  
Suite 3  
Terryville, CT 06786

**Project:** 19-139.10T1 / ACES - WIMS - 88 Bassett Road, North Haven

**Phone:** (860) 589-8257

**Fax:** (860) 585-7034

**Received Date:** 06/01/2019 10:15 AM

**Analysis Date:** 06/03/2019 - 06/05/2019

**Collected Date:** 05/31/2019

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
05-31-TC-01 041914839-0001	117 - 6" Cove Base - Black	Black Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
05-31-TC-02 041914839-0002	220 - 6" Cove Base - Black	Black Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
05-31-TC-03 041914839-0003	113 - 6" Cove Base - Grey	Gray Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
05-31-TC-04 041914839-0004	113 - 6" Cove Base - Grey	Gray Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
05-31-TC-05 041914839-0005	133 - 6" Cove Base - Maroon	Red Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
05-31-TC-06 041914839-0006	134 - 6" Cove Base - Maroon	Red Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
05-31-TC-07 041914839-0007	140 - 4" Cove Base - Black	Black Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
05-31-TC-08 041914839-0008	141 - 4" Cove Base - Black	Black Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
05-31-TC-09 041914839-0009	200 - 4" Cove Base - Maroon	Red Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
05-31-TC-10 041914839-0010	113A - 4" Cove Base - Maroon	Red Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. 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. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Initial report from: 06/03/2019 11:05:01





# EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-5974

<http://www.EMSL.com> / [cinnasblab@EMSL.com](mailto:cinnasblab@EMSL.com)

EMSL Order: 041914839

Customer ID: EEVM50

Customer PO:

Project ID:

**Attention:** Brandy LeBlanc  
Eagle Environmental, Inc. - CT  
8 South Main Street  
Suite 3  
Terryville, CT 06786

**Project:** 19-139.10T1 / ACES - WIMS - 88 Bassett Road, North Haven

**Phone:** (860) 589-8257

**Fax:** (860) 585-7034

**Received Date:** 06/01/2019 10:15 AM

**Analysis Date:** 06/03/2019 - 06/05/2019

**Collected Date:** 05/31/2019

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
05-31-TC-11 041914839-0011	200A - Tackboard Adhesive - Yellow	Yellow Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
05-31-TC-12 041914839-0012	200 - Tackboard Adhesive - Yellow	Yellow Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
05-31-TC-13 041914839-0013	207 - Bottom Layer Plaster on Concrete - White	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
05-31-TC-14 041914839-0014	207 - Bottom Layer Plaster on Concrete - White	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
05-31-TC-15 041914839-0015	207 - Top Layer Skim Coat on Plaster - White	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected
05-31-TC-16 041914839-0016	207 - Top Layer Skim Coat on Plaster - White	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	None Detected

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. 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. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Initial report from: 06/03/2019 11:05:01



# EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-5974

<http://www.EMSL.com> / [cinnasblab@EMSL.com](mailto:cinnasblab@EMSL.com)

EMSL Order: 041914839

Customer ID: EEVM50

Customer PO:

Project ID:

**Attention:** Brandy LeBlanc  
Eagle Environmental, Inc. - CT  
8 South Main Street  
Suite 3  
Terryville, CT 06786

**Project:** 19-139.10T1 / ACES - WIMS - 88 Bassett Road, North Haven

**Phone:** (860) 589-8257

**Fax:** (860) 585-7034

**Received Date:** 06/01/2019 10:15 AM

**Analysis Date:** 06/03/2019 - 06/05/2019

**Collected Date:** 05/31/2019

The samples in this report were submitted to EMSL for analysis by Asbestos Analysis of Bulk materials via EPA/600 (0513) Method using Polarized Light Microscopy. The reference number for these samples is the EMSL Order ID above. Please use this reference number when calling about these samples.

## Report Comments:

Sample Receipt Date: 06/01/2019

Sample Receipt Time: 10:15 AM

Analysis Completed Date: 06/05/2019

Analysis Completed Time: 7:53 AM

## **Analyst(s):**

Erica Valent PLM (8)

Jacqueline Innella PLM (8)

## **Samples Reviewed and approved by:**

Benjamin Ellis, Laboratory Manager  
or other approved signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. 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. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

**APPENDIX A**

**OPERATION & MAINTENANCE PROCEDURES**

## **OPERATIONS AND MAINTENANCE PROCEDURES FOR VARIOUS ASBESTOS-CONTAINING BUILDING MATERIALS**

### **A. SURFACING MATERIALS**

“Surfacing Materials” means materials in a school building that are sprayed-on, troweled-on, or otherwise applied to surfaces. These include sprayed-on fireproofing materials on structural members, ceiling and wall plasters, or other materials applied to surfaces for acoustical, fireproofing, or other purposes.

Surfacing Materials are generally considered friable and can release asbestos fibers if damaged by impact, air erosion, vibration, and/or water intrusion. The following procedures, when properly implemented, will reduce the potential for fiber release:

#### **1. Sprayed-on fire-proofing**

- a) Identify the materials and post warning signs on the laid-in or glued-in ceiling tile. If the decking is not covered, place the sign on the wall.
- b) Maintain the materials in intact state and undamaged condition. During winter, pigeons, squirrels and other rodents tend to roost in boiler/machine rooms and dislodge sprayed-on fireproofing on the decking. Prevent such possibilities.
- c) Prevent water leakage. If the material is significantly damaged, removal is the best option. For minor damage, enclosure is a temporary solution. Encapsulation of damaged sprayed-on fireproofing material is not recommended.
- d) Train the custodial people who are responsible for care and maintenance of surfacing materials. Please note that the repair/removal can only be performed by a licensed abatement contractor.

#### **2. Ceiling and wall plaster**

- a) Identify the materials and post warning signs.
- b) Maintain the materials in intact state and undamaged condition. Avoid storing/stacking on/near the materials to reduce contact damage.
- c) Prevent water leakage. If the material is significantly damaged, removal is the best option. For minor damage, repair or enclosure is a temporary solution.
- d) Train the custodial people who are responsible for care and maintenance of surfacing materials.

### **B. THERMAL SYSTEM INSULATION (TSI)**

“Thermal System Insulation (TSI)” means insulating materials applied to pipes, pipe fittings, boilers, breeching, tanks, ducts, or other components to prevent process heat loss or gain, water condensation, or for other purposes (e.g., fire door insulation core).

TSI are generally considered friable ACM. This means they can be easily damaged, increasing the potential for fiber release. The following procedures, when properly implemented, will reduce the potential for fiber release:

1. Boiler and breeching insulation

- a) Identify the locations and label the boiler. Warning signs should be posted outside the boiler room.
- b) Reduce the likelihood of fiber release by ensuring that the insulation is not damaged. Avoid storing/stacking on/near the boiler to reduce contact damage.
- c) Maintain the insulation in intact state and undamaged condition. Repair damaged areas as soon as possible to prevent further deterioration. If repair is not feasible due to extensive damage/deterioration, remove the material.
- d) Train the custodial people who are responsible for care and maintenance of TSI. Please note that the repair/removal can only be performed by a licensed abatement contractor.

2. Pipe, pipe-fittings, tank and duct insulation

- a) Identify the locations and label the materials. Warning signs should be posted outside of rooms that have TSI materials.
- b) Reduce the likelihood of fiber release by ensuring that the materials are not damaged. Avoid storing/stacking near the materials to reduce contact damage.
- c) Maintain all TSI materials in intact state and undamaged condition. Inspect the protective jackets for damage. Repair damaged areas as soon as possible, to prevent further deterioration. If repair is not feasible due to extensive damage/deterioration, remove the material.
- d) Train the custodial people who are responsible for care and maintenance of TSI. Please note that the repair/removal can only be performed by a licensed abatement contractor.

3. Fire door

- a) Identify the locations and label the materials.
- b) Since there may be a number of different types of fire doors throughout a building, fire door cores must be considered to have asbestos-containing interior insulation unless sample result prove otherwise. Prior to performing any maintenance on any door (lock change, drilling, etc.), the door should be surveyed by qualified personnel to rule out the existence of an asbestos core.
- c) Train the custodial people who are responsible for care and maintenance of TSI.

Please note that the repair/removal can only be performed by a licensed abatement contractor.

## C. MISCELLANEOUS MATERIALS

“Miscellaneous Materials” are all other ACM in a school building that does not fall under the categories of Surfacing Materials or TSI. These include floor tiles, floor tile and carpet mastic, gypsum wallboard and joint compound, ceiling tiles, glue daubs, transite panels, laboratory counter tops, wallbase and associated glue, window caulking and glazing compounds etc. The following maintenance procedures are recommended for these materials:

### 1. Vinyl Asbestos Floor Tiles (VAT)

Vinyl Asbestos Floor Tiles (VAT) are considered non-friable, however routine maintenance procedures such as spray-buffing, burnishing, wet scrubbing, and stripping can generate asbestos fibers. Following procedures, when properly implemented, will reduce the potential of fiber release:

- a) Do not sand, grind or abrade the tiles. Stripping of VAT should be done as infrequently as possible. When stripping becomes necessary, follow the appropriate work practices. Never perform dry stripping.
- b) During spray buffing or burnishing the floor operate the machine at the lowest workable speed and use the least abrasive pad. Use a wet mop for routine cleaning whenever possible.
- c) Routinely check whether chair and desk glides are in good condition and replace when necessary. Worn glides can gouge the floor and cause fiber release.
- d) Place carpets/floor mats in all entrances to reduce abrasion of floor tiles by sand and pebbles. During winter, have parking lots and walkways swept to the extent possible to avoid the tracking of salt and ice-melting compounds into the school by the students.
- e) Train the custodial people who are responsible for care and maintenance of VAT. Please note that the repair/removal can only be performed by a licensed abatement contractor.

### 2. Gypsum wallboard and joint compound assembly

- a) Since there may exist a number of different homogeneous assemblies in a building, all sheetrock/joint compounds must be assumed to be ACM unless sample results prove otherwise. If any specific areas are going to be disturbed, the material in that area should be sampled.
- b) Reduce the likelihood of fiber release by avoiding cutting or drilling holes through the sheetrock panels.

### 3. Ceiling Tile and Glue Daubs

- a) Reduce the likelihood of fiber release by limiting access to the area above the ceiling tiles. Maintain the ceiling tiles in undamaged condition. Replace any damaged or water-stained tile.
- b) If the ceiling tiles are negative for asbestos, sample and analyze the glue daubs to ascertain whether these are asbestos containing before the tiles are replaced.

4. Transite Panels, Laboratory Counter Tops, Window Caulking and Glazing Compounds
  - a) Reduce the likelihood of fiber release.
  - b) Maintain transite panels, lab table tops and window caulking and glazing compounds in undamaged condition.
5. Carpet Glue, Baseboard and Mastic
  - a) Reduce the likelihood of fiber release by leaving base cove and carpets in place.
  - b) Maintain carpets and base cove in good condition. Sample and analyze the glue and the mastic to ascertain whether these are asbestos containing if the renovation activities are going to impact the carpet and the baseboard.

**APPENDIX B**

**PERIODIC SURVEILLANCE FORM**



**PERIODIC SURVEILLANCE FORM**  
**WINTERGREEN INTERDISTRICT MAGNET SCHOOL**

<b>Local Education Agency (LEA):</b>	Area Cooperative Educational Services (ACES)	<b>Facility:</b>	Wintergreen Interdistrict Magnet School
<b>Project No:</b>	350 State Street, North Haven, Connecticut	<b>Address:</b>	88 Bassett Road, North Haven, Connecticut
		<b>Date of Inspection:</b>	

ACM Location(s)	Eagle ID #	Asbestos Containing Material	Material Type	Previous Condition	Current Condition	Change in Condition (YES/NO)	Quantity Damaged (SF/LF)	Comments
BASEMENT								
Old Locker Room Area	-	Pipe Fitting Insulation (above plaster ceiling)	TSI	N/A				
		Door Frame Caulk	MISC	G				
GROUND FLOOR - CLASSROOM WING								
East Corridor	023	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	N/A				
		Pipe Fitting Insulation (above suspended ceiling)	TSI	N/A				
West Corridor	024	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	N/A				
		Pipe Fitting Insulation (above suspended ceiling)	TSI	N/A				
North Corridor	025	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	N/A				
		Pipe Fitting Insulation	TSI	N/A				
GROUND FLOOR - CLASSROOM WING								
South Corridor	026	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	N/A				
		Pipe Fitting Insulation	TSI	N/A				
Office	001	Pipe Fitting Insulation	TSI	N/A				
		Window Caulk	MISC	D				
Men's Room	015	Door Frame Caulk	MISC	G				
		Door Frame Caulk	MISC	G				
Storage	002	Door Frame Caulk	MISC	G				
		Door Frame Caulk	MISC	G				
Women's Room	016	Door Frame Caulk	MISC	G				
		Window Caulk	MISC	D				
Classroom	003	Door Frame Caulk	MISC	G				
		Window Caulk	MISC	SD				
Office	004	Door Frame Caulk	MISC	G				
		Pipe Fitting Insulation	TSI	N/A				
Office	005	Window Caulk	MISC	D				
		Door Frame Caulk	MISC	G				
Storage	005A	Door Frame Caulk	MISC	G				
		Pipe Fitting Insulation	TSI	N/A				
Office	005B	Door Frame Caulk	MISC	G				
		Pipe Fitting Insulation	TSI	N/A				

**PERIODIC SURVEILLANCE FORM  
WINTERGREEN INTERDISTRICT MAGNET SCHOOL**

ACM Location(s)	Eagle ID #	Asbestos Containing Material	Material Type	Previous Condition	Current Condition	Change in Condition (YES/NO)	Quantity Damaged (SF/LF)	Comments	
Office	006	9" x 9" Floor Tile-light green & Associated Mastic (under carpet)	MISC	N/A					
		Door Frame Caulk	MISC	G					
Office	007	Door Frame Caulk	MISC	D					
Equipment Storage	007A	Pipe Fitting Insulation	TSI	N/A					
		Door Frame Caulk	MISC	G					
Classroom	008	Pipe Fitting Insulation	TSI	N/A					
		Door Frame Caulk	MISC	G					
Office	009	Door Frame Caulk	MISC	G					
North Elevator	017	Door Frame Caulk	MISC	G					
		9" x 9" Floor Tile-tan & Associated Mastic	MISC	D					
Classroom/Lab	010	Window Caulk	MISC	SD					
		Door Frame Caulk	MISC	D					
Toyota Lab	011	Pipe Fitting Insulation	TSI	N/A					
		9" x 9" Floor Tile-light grey & Associated Mastic	MISC	D					
		Window Caulk	MISC	D					
GM Lab	012	Door Frame Caulk	MISC	G					
		9" x 9" Floor Tile-light grey & Associated Mastic	MISC	G					
		Window Caulk	MISC	SD					
Connecting Passage Vestibule to Auto Shops	018 019	Door Frame Caulk	MISC	G					
		Window Caulk	MISC	SD					
		Pipe Fitting Insulation	TSI	N/A					
Boiler Room	020	Boiler Insulation (under jackets of 3 boilers)	TSI	G					
		Door Frame Caulk	MISC	G					
Electrical Room	013A	Door Frame Caulk	MISC	G					
Men's Room	021	Door Frame Caulk	MISC	G					
Women's Room	022	Door Frame Caulk	MISC	D					
Auto Lab	013	Door Frame Caulk	MISC	G					
Auto Lab	014	Door Frame Caulk	MISC	D					
FIRST FLOOR - ADMIN. OFFICE WING									
Main Lobby	142	Window Caulk	MISC	D					
Business and Industry	100A	Window Caulk	MISC	SD					
Mechanical Office	143	Pipe Fitting Insulation	TSI	G					
		9" x 9" Floor Tile-tan & Associated Mastic	MISC	G					
Phone Closet	144	Pipe Fitting Insulation	TSI	G					
		9" x 9" Floor Tile-tan & Associated Mastic	MISC	D					

# PERIODIC SURVEILLANCE FORM

ACM Location(s)	Eagle ID #	Asbestos Containing Material	Material Type	Previous Condition	Current Condition	Change in Condition (YES/NO)	Quantity Damaged (SF/LF)	Comments
Health Office	102A	Door Frame Caulk	MISC	G				
Dean's Office	102B	Door Frame Caulk	MISC	G				
Business and Industry	102C	Window Caulk	MISC	G				
Business and Industry	102D	Window Caulk	MISC	G				
Office	102E	Window Caulk	MISC	SD				
Campus Office	103A	Door Frame Caulk	MISC	G				
Office	103B	Window Caulk	MISC	D				
		Door Frame Caulk	MISC	G				
Office	103C	Window Caulk	MISC	G				
		Door Frame Caulk	MISC	D				
Office	103D	Window Caulk	MISC	G				
		Door Frame Caulk	MISC	G				
Office	103E	Window Caulk	MISC	D				
		Door Frame Caulk	MISC	G				
Office	103F	Window Caulk	MISC	G				
		Door Frame Caulk	MISC	G				
Office	103G	Window Caulk	MISC	G				
		Door Frame Caulk	MISC	G				
Admin. Area Corridor	145	Pipe Fitting Insulation	TSI	N/A				
FIRST FLOOR - AUDITORIUM WING								
North Corridor	146	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	D				
		Pipe Fitting Insulation	TSI	N/A				
		Door Frame Caulk	MISC	D				
West Corridor	147	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	D				
South Corridor	148	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	D				
		Door Frame Caulk	MISC	G				
		Pipe Fitting Insulation	TSI	N/A				
East Corridor	149	Pipe Fitting Insulation	TSI	N/A				
Auditorium	104	Pipe Fitting Insulation (8 small fittings along stage back wall)	TSI	G				
		Door Frame Caulk	MISC	G				
Classroom	105	9" x 9" Floor Tile-tan & Associated Mastic	MISC	D				
		Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	G				

**PERIODIC SURVEILLANCE FORM**  
**WINTERGREEN INTERDISTRICT MAGNET SCHOOL**

ACM Location(s)	Eagle ID #	Asbestos Containing Material	Material Type	Previous Condition	Current Condition	Change in Condition (YES/NO)	Quantity Damaged (SF/LF)	Comments
Maintenance	106	Door Frame Caulk	MISC	D				
Maintenance Office	106A	Door Frame Caulk	MISC	G				
Bathroom	106B	Door Frame Caulk	MISC	G				
Custodian Closet	106C	Door Frame Caulk	MISC	G				
Storage	106D	Door Frame Caulk	MISC	G				
Classroom	107	9" x 9" Floor Tile-tan & Associated Mastic	MISC	D				
		Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	G				
Office	107A	Window Caulk	MISC	G				
		Pipe Fitting Insulation	TSI	G				
		Door Frame Caulk	MISC	G				
Office	107B	Door Frame Caulk	MISC	G				
Office	107C	9" x 9" Floor Tile-tan & Associated Mastic	MISC	G				
		Door Frame Caulk	MISC	G				
Office	108	Door Frame Caulk	MISC	G				
		Window Caulk	MISC	D				
Office	109	Door Frame Caulk	MISC	G				
		Door Frame Caulk	MISC	G				
Darkrooms	150	Window Caulk	MISC	SD				
		9" x 9" Floor Tile-light grey & Associated Mastic	MISC	D				
		9" x 9" Floor Tile-tan & Associated Mastic	MISC	D				
Classroom	110	Window Caulk	MISC	D				
		Pipe Fitting Insulation	TSI	G				
		Door Frame Caulk	MISC	G				
Graphics Classroom	111	9" x 9" Floor Tile-light green & Associated Mastic	MISC	D				
		Window Caulk	MISC	SD				
		Pipe Fitting Insulation	TSI	N/A				
Storage	112A	Door Frame Caulk	MISC	D				
		9" x 9" Floor Tile-light green & Associated Mastic	MISC	G				
		Door Frame Caulk	MISC	G				
Office	112	9" x 9" Floor Tile-light green & Associated Mastic	MISC	D				
		Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	G				

**PERIODIC SURVEILLANCE FORM**  
**WINTERGREEN INTERDISTRICT MAGNET SCHOOL**

ACM Location(s)	Eagle ID #	Asbestos Containing Material	Material Type	Previous Condition	Current Condition	Change in Condition (YES/NO)	Quantity Damaged (SF/LF)	Comments
Conference Room	113	Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	D				
		Door Frame Caulk	MISC	G				
Kitchen	151	Pipe Fitting Insulation	TSI	N/A				
		Door Frame Caulk	MISC	D				
		Door Frame Caulk	MISC	G				
Office	115	Door Frame Caulk	MISC	G				
Office	115A	Door Frame Caulk	MISC	G				
Office	116	Door Frame Caulk	MISC	G				
Cafeteria	117	9" x 9" Floor Tile-red/tan & Associated Mastic	MISC	D				
		Window Caulk	MISC	SD				
		Pipe Fitting Insulation	TSI	N/A				
		Door Frame Caulk	MISC	G				
		Window Caulk	MISC	SD				
Staff Lounge	117A	Door Frame Caulk	MISC	G				

**FIRST FLOOR - LABORATORY WING**

East Corridor	152	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	D				
		Pipe Fitting Insulation	TSI	N/A				
		Door Frame Caulk	MISC	G				
West Corridor	153	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	D				
		Pipe Fitting Insulation	TSI	N/A				
		Door Frame Caulk	MISC	G				
Computer Room	120	Floor Tile Mastic (assumed to exist below carpet)	MISC	G				
Computer Room	121	Door Frame Caulk	MISC	G				
		9" x 9" Floor Tile-light grey & Associated Mastic	MISC	G				
		Window Caulk	MISC	G				
Lab	122	Door Frame Caulk	MISC	G				
		9" x 9" Floor Tile-tan & Associated Mastic	MISC	D				
		Window Caulk	MISC	SD				
Office	123	Door Frame Caulk	MISC	G				
		9" x 9" Floor Tile-light grey & Associated Mastic	MISC	N/A				
		Door Frame Caulk	MISC	G				
Storage	124	9" x 9" Floor Tile-light grey & Associated Mastic	MISC	N/A				
		Door Frame Caulk	MISC	G				

**PERIODIC SURVEILLANCE FORM  
WINTERGREEN INTERDISTRICT MAGNET SCHOOL**

ACM Location(s)	Eagle ID #	Asbestos Containing Material	Material Type	Previous Condition	Current Condition	Change in Condition (YES/NO)	Quantity Damaged (SF/LF)	Comments
Lab	125	9" x 9" Floor Tile-light green & Associated Mastic	MISC	D				
		Window Caulk	MISC	G				
		Pipe Fitting Insulation	TSI	N/A				
Lab	126	Door Frame Caulk	MISC	G				
		9" x 9" Floor Tile-light grey & Associated Mastic	MISC	N/A				
		Door Frame Caulk	MISC	G				
Lab	127	9" x 9" Floor Tile-light grey & Associated Mastic	MISC	D				
		Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	D				
Lab	128	9" x 9" Floor Tile-light grey & Associated Mastic	MISC	D				
		Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	G				
Storage	128A	9" x 9" Floor Tile-tan & Associated Mastic	MISC	G				
		Door Frame Caulk	MISC	G				
		Door Frame Caulk	MISC	G				
Women's Restroom	128B	Door Frame Caulk	MISC	G				
		Door Frame Caulk	MISC	G				
		Door Frame Caulk	MISC	G				
Men's Restroom	155	Door Frame Caulk	MISC	G				
		Door Frame Caulk	MISC	G				
		Door Frame Caulk	MISC	G				
Men Handicapped	157	Door Frame Caulk	MISC	G				
		Door Frame Caulk	MISC	G				
		Door Frame Caulk	MISC	G				
Women Handicapped	158	Door Frame Caulk	MISC	G				
		Door Frame Caulk	MISC	G				
		Door Frame Caulk	MISC	G				
Office	129	9" x 9" Floor Tile-tan & Associated Mastic (possibly under carpet)	MISC	N/A				
		Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	D				
Computer Room	130	9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	N/A				
		Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	D				
Student Lounge	131	9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	N/A				
		Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	G				
Passage to Room 132	132	Door Frame Caulk	MISC	G				
		Door Frame Caulk	MISC	G				
		Door Frame Caulk	MISC	G				
Classroom	133	9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	N/A				
		Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	D				

**PERIODIC SURVEILLANCE FORM  
WINTERGREEN INTERDISTRICT MAGNET SCHOOL**

ACM Location(s)	Eagle ID #	Asbestos Containing Material	Material Type	Previous Condition	Current Condition	Change in Condition (YES/NO)	Quantity Damaged (SF/LF)	Comments
Classroom	134	Window Caulk	MISC	SD				
		Old Floor Tile Mastic (under levelastic)	MISC	N/A				
		Pipe Fitting Insulation	TSI	N/A				
		Door Frame Caulk	MISC	D				
Custodian	134A	Door Frame Caulk	MISC	G				
		Pipe Fitting Insulation	TSI	G				
Classroom	135	9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	N/A				
Classroom	135	Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	G				
		Pipe Fitting Insulation	TSI	G				
Classroom	136	9" x 9" Floor Tile-light green & Associated Mastic	MISC	G				
		Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	G				
Lab	137	9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	N/A				
		Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	G				
		9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	N/A				
Office	138	Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	G				
		9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	N/A				
Office	139	Door Frame Caulk	MISC	G				
		9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	N/A				
		Door Frame Caulk	MISC	G				
President's Office	139A	9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	N/A				
		Door Frame Caulk	MISC	SD				
		Window Caulk	MISC	G				
		Door Frame Caulk	MISC	N/A				
Bookstore	140	9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	SD				
		Window Caulk	MISC	G				
		Door Frame Caulk	MISC	N/A				
Computer Room	141	9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	N/A				
		Door Frame Caulk	MISC	G				
		SECOND FLOOR - LIBRARY WING						
Vestibule	236	9" x 9" Floor Tile-green & Associated Mastic	MISC	D				
Connecting Passage	237	12" x 12" Floor Tile-brown & Associated Mastic	MISC	D				
		Window Caulk	MISC	SD				
		Pipe Fitting Insulation	TSI	N/A				
Library	200	Window Caulk	MISC	D				
		Door Frame Caulk	MISC	G				

**PERIODIC SURVEILLANCE FORM**  
**WINTERGREEN INTERDISTRICT MAGNET SCHOOL**

ACM Location(s)	Eagle ID #	Asbestos Containing Material	Material Type	Previous Condition	Current Condition	Change in Condition (YES/NO)	Quantity Damaged (SF/LF)	Comments
Library Office	200A	Door Frame Caulk	MISC	G				
		Window Caulk	MISC	G				
Library Office	200B	Door Frame Caulk	MISC	G				
		Window Caulk	MISC	G				
Library Office	200C	Door Frame Caulk	MISC	G				
Library Office	200D	Window Caulk	MISC	G				
<b>SECOND FLOOR - LAB WING</b>								
East Corridor	238	12" x 12" Floor Tile-tan & Associated Mastic	MISC	D				
		Window Caulk	MISC	SD				
		Pipe Fitting Insulation	MISC	N/A				
West Corridor	239	12" x 12" Floor Tile-tan & Associated Mastic	MISC	D				
		Pipe Fitting Insulation	TSI	N/A				
North Corridor	240	12" x 12" Floor Tile-tan & Associated Mastic	MISC	D				
South Corridor	241	12" x 12" Floor Tile-tan & Associated Mastic	MISC	G				
Classroom	201	Window Caulk	MISC	SD				
		12" x 12" Floor Tile-tan & Associated Mastic	MISC	D				
		Door Frame Caulk	MISC	D				
Storage	201A	9" x 9" Floor Tile-tan & Associated Mastic	MISC	G				
		Pipe Fitting Insulation	TSI	G				
		Door Frame Caulk	MISC	G				
Projection Booth	201B	12" x 12" Floor Tile-tan & Associated Mastic	MISC	D				
		Door Frame Caulk	MISC	G				
Storage	201C	Door Frame Caulk	MISC	G				
Women's Restroom		Door Frame Caulk	MISC	G				
Men's Restroom		Door Frame Caulk	MISC	G				
Office	202	9" x 9" Floor Tile Mastic (suspect below carpet)	MISC	N/A				
		Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	G				
Lab	203	Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	G				
		Window Caulk	MISC	SD				
Lab	204	9" x 9" Floor Tile-light green & Associated Mastic	MISC	D				
		Door Frame Caulk	MISC	G				
		12" x 12" Floor Tile-tan & Associated Mastic	MISC	D				
Lab	205	Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	G				
		Door Frame Caulk	MISC	G				



**PERIODIC SURVEILLANCE FORM**  
**WINTERGREEN INTERDISTRICT MAGNET SCHOOL**

ACM Location(s)	Eagle ID #	Asbestos Containing Material	Material Type	Previous Condition	Current Condition	Change in Condition (YES/NO)	Quantity Damaged (SF/LF)	Comments
Lab	206	Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	D				
		Sink Undercoating-white	MISC	G				
Video Conference Center	207	Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	D				
		Door Frame Caulk	MISC	G				
Office	207A	12" x 12" Floor Tile-tan & Associated Mastic	MISC	D				
Office	208	Door Frame Caulk	MISC	D				
Storage	208A	9" x 9" Floor Tile & Associated Mastic	MISC	G				
Storage	208B	9" x 9" Floor Tile & Associated Mastic	MISC	G				
Office	208C	12" x 12" Floor Tile-tan & Associated Mastic	MISC	G				
Office	208D	12" x 12" Floor Tile-tan & Associated Mastic	MISC	D				
Lab	209	Window Caulk	MISC	SD				
Lab	210	Window Caulk	MISC	SD				
Office	211	12" x 12" Floor Tile-tan & Associated Mastic	MISC	G				
Mechanical Room	244	Duct Insulation	TSI	G				
Office	212	Window Caulk	MISC	SD				
Office	213	12" x 12" Floor Tile-tan & Associated Mastic	MISC	G				
Lab	214	Window Caulk	MISC	SD				
Lab	215	12" x 12" Floor Tile-tan & Associated Mastic	MISC	G				
Lab	216	Window Caulk	MISC	SD				
Storage	216A	Door Frame Caulk	MISC	G				

**PERIODIC SURVEILLANCE FORM**  
**WINTERGREEN INTERDISTRICT MAGNET SCHOOL**

ACM Location(s)	Eagle ID #	Asbestos Containing Material	Material Type	Previous Condition	Current Condition	Change in Condition (YES/NO)	Quantity Damaged (SF/LF)	Comments
<b>SECOND FLOOR - CLASSROOM WING</b>								
East Corridor	245	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	D				
West Corridor	246	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	G				
Classroom	220	9" x 9" Floor Tile-light green & Associated Mastic	MISC	D				
		Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	D				
Classroom	221	9" x 9" Floor Tile-light green & Associated Mastic	MISC	D				
		Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	G				
Storage	221A	9" x 9" Floor Tile-light grey & Associated Mastic	MISC	G				
		Door Frame Caulk	MISC	G				
Classroom	222	9" x 9" Floor Tile-tan & Associated Mastic	MISC	D				
		Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	G				
Storage	222A	9" x 9" Floor Tile-tan & Associated Mastic	MISC	G				
		Door Frame Caulk	MISC	D				
Classroom	223	9" x 9" Floor Tile-tan & Associated Mastic	MISC	D				
		Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	G				
Classroom	224	9" x 9" Floor Tile-light grey & Associated Mastic	MISC	G				
		Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	G				
Storage	224A	9" x 9" Floor Tile-tan & Associated Mastic	MISC	G				
		Door Frame Caulk	MISC	G				
Storage	224B	Door Frame Caulk	MISC	G				
Classroom	225	9" x 9" Floor Tile-light green & Associated Mastic	MISC	G				
		Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	G				
Classroom	226	9" x 9" Floor Tile-light grey & Associated Mastic	MISC	G				
		Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	D				



# PERIODIC SURVEILLANCE FORM

ACM Location(s)	Eagle ID #	Asbestos Containing Material	Material Type	Previous Condition	Current Condition	Change in Condition (YES/NO)	Quantity Damaged (SF/LF)	Comments
STAIRWELLS								
Stairwell A	-	9" x 9" Floor Tile-green, red, tan & Associated Mastic (first floor landing only)	MISC	D				
		Door Frame Caulk	MISC	G				
Stairwell B	-	Door Frame Caulk	MISC	D				
Stairwell C	-	Door Frame Caulk	MISC	G				
Stairwell D	-	9" x 9" Floor Tile-green, red, tan & Associated Mastic	MISC	D				
		Door Frame Caulk	MISC	G				
Stairwell E	-	Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	D				
Stairwell F	-	Window Caulk	MISC	SD				
		Door Frame Caulk	MISC	G				

**KEY**

**Material Type:** SURF = Surfacing, MISC = Miscellaneous, TSI = Thermal Systems Insulation **Quantity:** LF = Linear Feet, SF = Square Feet, EA = Each, Quantity = Qty, NQ = Not Quantified

**Material Condition:** G = Good, D = Damaged, SD = Significantly Damaged, N/A = Not Applicable

---

---

Surveillance conducted by: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

I, the LEA's Designated Person, have read and understood the findings noted above:

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**APPENDIX C**  
**INITIAL CLEANING LETTER**

**DESIGNATED PERSON STATEMENT OF INITIAL CLEANING**  
**DPH 19a-333-8(b)(1) and EPA 40 CFR 763.939(e)(7)**

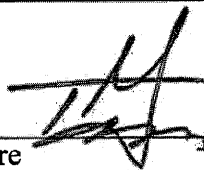
In accordance with the Regulations of State of Connecticut Department of Public Health (CTDPH) 19a-333-8(b)(1) and USEPA 40 CFR 763.91(c)(1), this is to confirm that an Initial Cleaning has been performed at the new Wintergreen Interdistrict Middle School building (former Gateway Community College) at 88 Bassett Road, North Haven, Connecticut in second and third weeks of June, 2019. The cleaning was performed as follows:

1. All the carpets were vacuumed and steam-cleaned.
2. All the floors were vacuumed and waxed. The window sills and other flat surfaces were HEPA-vacuumed.
3. The debris and filters were properly disposed of.

Local Education Agency: ACES

LEA Designated Person: Tim Gunn

Signature



Date

July 19, 2019

## **APPENDIX D**

### **ANNUAL NOTIFICATION LETTER**



## Wintergreen Interdistrict Magnet School

88 Bassett Road • North Haven, CT 06473  
Phone 203.281.9668 • Fax 203.281.7946

Todd A. Solli, Principal  
Vicki Rose, Assistant Principal

Date: July 16, 2019

### RE: NOTICE TO PARENTS/ GUARDIANS, FACULTY AND STAFF

A formal asbestos management program is in place for Wintergreen Interdistrict Magnet School. The purpose of this program is to manage the asbestos-containing building materials (ACBM) in our school and to take steps to make sure that these materials do not present an exposure hazard to the students, faculty, or staff. This is in compliance with the United States Environmental Protection Agency (USEPA) Asbestos Hazard Emergency Response Act (AHERA) Regulation 40 CFR 763.93 and the State of Connecticut Department of Public Health (CTDPH) Asbestos-Containing Materials in Schools Regulation 19a-333-1 through 13.

The asbestos management program is implemented through asbestos management plan. An asbestos management plan has been developed for Wintergreen Interdistrict Magnet School following an asbestos inspection by Eagle Environmental, Inc.

This management plan identifies the locations of the identified/assumed ACBM in the school and details the ongoing management program. The plan also includes descriptions of previous asbestos inspections, plans for ongoing periodic surveillance, and preventive measure procedures to avoid damaging the ACBM.

A copy of school asbestos management plan is maintained in the school office. The plan is available for review during normal school business hours by contacting Mr. Todd Solli, at (203) 281-9668.

Sincerely,

Todd A. Solli, Principal  
Wintergreen Interdistrict Magnet School

ACES-WINTERGREEN INTERDISTRICT MAGNET SCHOOL  
*WHERE THE ARTS INSPIRE LEARNING*

An **ACES** Interdistrict Magnet School • [www.aces.org](http://www.aces.org)

---

Area Cooperative Educational Services • The Regional Educational Service Center Serving South Central Connecticut

*ACES does not discriminate on the basis of race, color, age, ethnicity, national origin, gender, disability or sexual orientation.*

---



## **APPENDIX E**

### **NOTIFICATION TO SHORT-TERM WORKERS/CONTRACTORS**

## ASBESTOS SHORT-TERM WORKER AND CONTRACTOR NOTICE

Date:

Work Description:

**Contractor/Vendor:**

---

---

---

---

(Address)

I have been informed that asbestos-containing materials have been identified at:

Wintergreen Interdistrict Magnet School  
88 Bassett Road  
North Haven, Connecticut

The AHERA Management Plan has been made available to me to identify the location of asbestos-containing building materials (ACBM) and suspect ACBM.

I am aware that it is my responsibility to inform my employees and any and all subcontractors and their employees of the presence of asbestos and the availability of the Management Plan.

Any incident involving the disturbance of asbestos-containing material and any questions will be reported to the Asbestos Designated Person, Mr. Timothy Gunn, at (203) 498-6839.

Project Manager (Print) \_\_\_\_\_  
(Contractor/Vendor)

Project Manager (Signature) \_\_\_\_\_  
(Contractor/Vendor)

**APPENDIX F**  
**ABATEMENT ACTION FORM**

## ABATEMENT ACTION FORM

LEA NAME: Area Cooperative Educational Services (ACES)

SCHOOL NAME: Wintergreen Interdistrict Magnet School

Use this form to document removal, enclosure, and encapsulation or repair materials greater than 3 Square or Linear Feet of Asbestos Containing Building Materials (ACBM). Provide one – (1) from for every abatement action.

1. Provide or attach detailed written description of abatement action.

Starting Date: \_\_\_\_\_ Completion Date: \_\_\_\_\_

2. Name of Abatement Contractor: \_\_\_\_\_

Address: \_\_\_\_\_

License #: \_\_\_\_\_

3. Name of Abatement Designer: \_\_\_\_\_

Address: \_\_\_\_\_

License#/Agency: \_\_\_\_\_

4. Air Monitoring Laboratory: \_\_\_\_\_

Address: \_\_\_\_\_

Accreditation #: \_\_\_\_\_

**APPENDIX G**  
**CONSULTANT CERTIFICATES**

# CERTIFICATE OF ACHIEVEMENT

*This certifies that*

***Ashis Roychowdhury***

*has successfully completed the*  
**8 Hour Asbestos Site Inspector/Management Planner Refresher Training**  
**Asbestos Accreditation Under TSCA Title II**  
**40 CFR Part 763**

*conducted by*

ATC Group Services, LLC  
73 William Franks Drive  
West Springfield, MA 01089  
(413) 781-0070

*Gregory Morsch*

Principal Instructor: Gregory Morsch

May 16, 2019

Date of Course

May 16, 2020

Expiration Date

*Gregory Morsch*

Regional Training Manager: Gregory Morsch

MPAR-3236

Certificate Number

May 16, 2019

Examination Date

## STATE OF CONNECTICUT

### DEPARTMENT OF PUBLIC HEALTH

PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTICUT

THE INDIVIDUAL NAMED BELOW IS CERTIFIED  
BY THIS DEPARTMENT AS A

**ASBESTOS CONSULTANT-INSP/MGMT PLANNER**

ASHIS ROYCHOWDHURY

CERTIFICATE NO.

000108

CURRENT THROUGH

03/31/20

VALIDATION NO.

03-744155

*Ashis Roychowdhury*

SIGNATURE

*Rafael*

COMMISSIONER

# CERTIFICATE OF ACHIEVEMENT

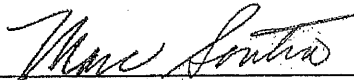
*This certifies that*

**Alexis St. Hilaire**

*has successfully completed the*  
**Asbestos Site Inspector Refresher Training  
Asbestos Accreditation Under TSCA Title II  
40 CFR Part 763**

*conducted by*

ATC Group Services LLC  
73 William Franks Drive  
West Springfield, MA 01089  
(413) 781-0070



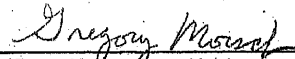
Principal Instructor: Marcus Souza

September 13, 2018

Date of Course

September 13, 2019

Expiration Date



Regional Training Manager: Gregory Morsch

SIAR - 6099

Certificate Number

September 13, 2018

Examination Date

## STATE OF CONNECTICUT

### DEPARTMENT OF PUBLIC HEALTH

PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTICUT

THE INDIVIDUAL NAMED BELOW IS CERTIFIED  
BY THIS DEPARTMENT AS A  
**ASBESTOS CONSULTANT-INSPECTOR**

ALEXIS M ST HILAIRE

CERTIFICATE NO.

000991

CURRENT THROUGH

12/31/19

VALIDATION NO.

03-726734

  
SIGNATURE

  
COMMISSIONER

**APPENDIX H**  
**DESIGNATED PERSON TRAINING CERTIFICATE**



# Fuss & O'Neill EnviroScience, LLC

146 Hartford Road, Manchester, CT 06040 – 860-646-2469

This is to certify that

**Tim Gunn**

has successfully completed the  
2 hr. Asbestos Awareness Course  
in compliance with 40 CFR Part 763.92(a)(1) and 29 CFR 1926.1101

Paul Bateman

Principal Instructor: Paul Bateman

August 22, 2018

Date of Course

*Note: Annual Refresher is required for Asbestos Awareness Training*

**APPENDIX I**  
**LABORATORY CERTIFICATE**



# State of Connecticut, Department of Public Health

## Approved Environmental Laboratory

THIS IS TO CERTIFY THAT THE LABORATORY DESCRIBED BELOW HAS BEEN APPROVED BY THE STATE DEPARTMENT OF PUBLIC HEALTH PURSUANT TO APPLICABLE PROVISIONS OF THE PUBLIC HEALTH CODE AND GENERAL STATUTES OF CONNECTICUT, FOR MAKING THE EXAMINATIONS, DETERMINATIONS OR TESTS SPECIFIED BELOW WHICH HAVE BEEN AUTHORIZED IN WRITING BY THAT DEPARTMENT.

### EMSL ANALYTICAL - NJ

LOCATED AT 200 Route 130 North IN Cinnaminson, NJ 08077

AND REGISTERED IN THE NAME OF Robert J. DeMalo

THIS CERTIFICATE IS ISSUED IN THE NAME OF  
Phillip Worby - Director  
William E. Chamberlin - Co-Director  
Benjamin Ellis - Co-Director  
Bin Wang - Co-Director  
WHO HAS BEEN DESIGNATED

BY THE REGISTERED OWNER/AUTHORIZED AGENT TO BE IN CHARGE OF THE LABORATORY WORK COVERED BY THIS CERTIFICATE OF APPROVAL AS FOLLOWS:

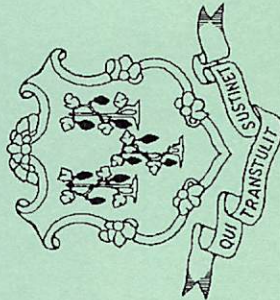
Drinking Water, Non-Potable Water/Wastewater,	Environmental Health and Housing	Building Materials
Solid Waste/Soils	Lead in Paint	Bulk Identification-PLM, TEM
Microbiologicals	Lead in Dust Wipes	Asbestos Fibers-PCM, TEM
Organic Chemicals	Lead Paint in Soil	
Inorganic Chemicals		
Radiochemicals		

SEE COMPUTER PRINT-OUT FOR SPECIFIC TESTS APPROVED

EFFECTIVE RENEWAL DATE July 1, 2018

THIS CERTIFICATE EXPIRES June 30, 2020

DATED AT HARTFORD, CONNECTICUT, THIS 27<sup>th</sup> DAY OF June, 2018 AND IS REVOCABLE FOR CAUSE BY THE STATE DEPARTMENT OF PUBLIC HEALTH



Registration #

PH - 0270

SUZANNE BLANCAFLOR, MS, MPH  
CHIEF, ENVIRONMENTAL HEALTH SECTION





SECTION 061000 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
  - 1. Wood blocking and nailers.

1.3 DEFINITIONS

- A. Boards or Strips: Lumber of less than 2 inches nominal size in least dimension.
- B. Dimension Lumber: Lumber of 2 inches nominal or greater but less than 5 inches nominal in least dimension.
- C. Lumber grading agencies, and the abbreviations used to reference them, include the following:
  - 1. NeLMA: Northeastern Lumber Manufacturers' Association.
  - 2. NLGA: National Lumber Grades Authority.
  - 3. WCLIB: West Coast Lumber Inspection Bureau.
  - 4. WWPA: Western Wood Products Association.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
  - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
  - 2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.
  - 3. For fire-retardant treatments, include physical properties of treated lumber both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D 5664.
  - 4. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

1.5 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports: For the following, from ICC-ES:

1. Wood-preservative-treated wood.
2. Fire-retardant-treated wood.
3. Power-driven fasteners.
4. Post-installed anchors.

## 1.6 QUALITY ASSURANCE

- A. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

## 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Stack wood products flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

# PART 2 - PRODUCTS

## 2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
  1. Factory mark each piece of lumber with grade stamp of grading agency.
- B. Maximum Moisture Content of Lumber: Fifteen percent (15%) unless otherwise indicated.

## 2.2 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Preservative Treatment by Pressure Process: AWP A U1; Use Category UC2 for interior construction not in contact with the ground, Use Category UC3b for exterior construction not in contact with the ground, and Use Category UC4a for items in contact with the ground.
  1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
- B. Kiln-dry lumber after treatment to a maximum moisture content of fifteen percent (15%). Do not use material that is warped or that does not comply with requirements for untreated material.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
- D. Application: Treat items indicated on Drawings, and the following:
  1. Wood sills, sleepers, blocking, furring, stripping and similar concealed members in contact with masonry or concrete.

## 2.3 FIRE-RETARDANT-TREATED MATERIALS

- A. General: Where fire-retardant-treated materials are indicated, materials shall comply with requirements in this article, that are acceptable to authorities having jurisdiction, and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.
- B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Products with a flame spread index of 25 or less when tested according to ASTM E 84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet beyond the centerline of the burners at any time during the test.
  - 1. Treatment shall not promote corrosion of metal fasteners.
  - 2. Treated materials shall comply with requirements specified above for fire-retardant-treated lumber and plywood by pressure process after being subjected to accelerated weathering according to ASTM D 2898. Use for all locations and where indicated.
  - 3. Design Value Adjustment Factors: Treated lumber shall be tested according to ASTM D 5664 and design value adjustment factors shall be calculated according to ASTM D 6841. For enclosed roof framing, framing in attic spaces, and where high temperature fire-retardant treatment is indicated, provide material with adjustment factors of not less than 0.85 modulus of elasticity and 0.75 for extreme fiber in bending for Project's climatological zone.
- C. Kiln-dry lumber and plywood after treatment to a maximum moisture content of fifteen percent (15%).
- D. Identify fire-retardant-treated wood with appropriate classification marking of qualified testing agency.
- E. Application: Treat all rough carpentry unless otherwise indicated.

## 2.4 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
  - 1. Blocking.
  - 2. Nailers.
  - 3. Grounds.
- B. Dimension Lumber Items: Standard, Stud, or No. 3 grade lumber of any of the following species:
  - 1. Hem-fir (north); NLGA.
  - 2. Hem-fir; WCLIB or WWPA.
  - 3. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.
- C. For blocking not used for attachment of other construction, Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.

- D. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

## 2.5 FASTENERS

- A. General: Fasteners shall be of size and type indicated and shall comply with requirements specified in this article for material and manufacture.
  - 1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners of Type 304 stainless-steel.
- B. Nails, Brads, and Staples: ASTM F 1667.
- C. Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.
- D. Post-Installed Anchors: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC01 or ICC-ES AC193 as appropriate for the substrate.
  - 1. Material: Stainless-steel with bolts and nuts complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2.

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- B. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry accurately to other construction; scribe and cope as needed for accurate fit. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- C. Do not splice structural members between supports unless otherwise indicated.
- D. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
- E. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- F. Comply with AWPAC M4 for applying field treatment to cut surfaces of preservative-treated lumber.
  - 1. Use copper naphthenate for items not continuously protected from liquid water.
- G. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:



1. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code (IBC).
2. ICC-ES evaluation report for fastener.

- H. Use steel common nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood. Drive nails snug but do not countersink nail heads unless otherwise indicated.

### 3.2 WOOD BLOCKING AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.

END OF SECTION 061000



SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
  - 1. Silicone joint sealants.
  - 2. Latex joint sealants.

1.3 ACTION SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
- B. Samples: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- C. Joint-Sealant Schedule: Include the following information:
  - 1. Joint-sealant application, joint location, and designation.
  - 2. Joint-sealant manufacturer and product name.
  - 3. Joint-sealant formulation.
  - 4. Joint-sealant color.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer.
- B. Product Certificates: For each kind of joint sealant and accessory, from manufacturer.
- C. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, indicating that sealants comply with requirements.
- D. Warranties: Sample of special warranties.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
- B. Source Limitations: Obtain each kind of joint sealant from single source from single manufacturer.
- C. Product Testing: Test joint sealants using a qualified testing agency.

1. Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated.

#### 1.6 PROJECT CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
  1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F (5 deg C).
  2. When joint substrates are wet.
  3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
  4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

#### 1.7 WARRANTY

- A. Special Installer's Warranty: Manufacturer's standard form in which Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
  1. Warranty Period: Five (5) years from date of Substantial Completion.
- B. Special warranties specified in this article exclude deterioration or failure of joint sealants from the following:
  1. Movement of the structure caused by structural settlement or errors attributable to design or construction resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression.
  2. Disintegration of joint substrates from natural causes exceeding design specifications.
  3. Mechanical damage caused by individuals, tools, or other outside agents.
  4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

### PART 2 - PRODUCTS

#### 2.1 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.
- B. VOC Content of Sealants: Sealants and sealant primers used as part of the weatherproofing system shall comply with the following:
  1. Interior: VOC content of 50 g/L or less.
  2. Exterior: VOC content of 100 g/L or less.

- C. Liquid-Applied Joint Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied joint sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.
- D. Stain-Test-Response Characteristics: Where sealants are specified to be non-staining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.
- E. Colors of Exposed Joint Sealants: As selected by Architect and Owner from manufacturer's full range, to match adjacent where required.

## 2.2 SILICONE JOINT SEALANTS

- A. Silicone, Non-Staining: Non-Staining, single-component, non-sag, plus fifty percent (+50%) and minus fifty percent (-50%) movement capability, non-traffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 50, Use NT.
  - 1. Products:
    - a. Dow Corning Corporation
    - b. Master Bond, Inc.
    - c. Pecora Corporation
    - d. Tremco Incorporated
    - e. Substitutions: Under provisions of Section 012500 "Substitution Procedures".

## 2.3 LATEX JOINT SEALANTS

- A. Latex Joint Sealant: Acrylic latex or siliconized acrylic latex, ASTM C 834, Type OP, Grade NF.
  - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. BASF Building Systems; **Sonolac**
    - b. Bostik, Inc.; **Chem-Calk 600**
    - c. Pecora Corporation; **AC-20+**
    - d. Tremco Incorporated; **Tremflex 834**
    - e. Substitutions: Under provisions of Section 012500 "Substitution Procedures".

## 2.4 JOINT SEALANT BACKING

- A. General: Provide sealant backings of material that are non-staining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C 1330, Type B (bi-cellular material with a surface skin), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint. Provide self-adhesive tape where applicable.

## 2.5 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Non-staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
  - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
  - 2. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
    - a. Concrete.
    - b. Masonry.
  - 3. Remove laitance and form-release agents from concrete.
  - 4. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:

- a. Metal.
  - b. Glass.
  - c. Porcelain enamel.
  - d. Glazed surfaces of ceramic tile.
- B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

### 3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
  - 1. Do not leave gaps between ends of sealant backings.
  - 2. Do not stretch, twist, puncture, or tear sealant backings.
  - 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
  - 1. Place sealants so they directly contact and fully wet joint substrates.
  - 2. Completely fill recesses in each joint configuration.
  - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- F. Tooling of Non-Sag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
  - 1. Remove excess sealant from surfaces adjacent to joints.
  - 2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.

3. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated.
4. Provide flush joint profile where indicated per Figure 8B in ASTM C 1193.
5. Provide recessed joint configuration of recess depth and at locations indicated per Figure 8C in ASTM C 1193.
  - a. Use masking tape to protect surfaces adjacent to recessed tooled joints.

### 3.4 CLEANING

- A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

### 3.5 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

### 3.6 JOINT-SEALANT SCHEDULE

- A. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal non-traffic surfaces.
  1. Joint Locations:
    - a. Control and expansion joints in unit masonry.
    - b. Joints between metal panels.
    - c. Joints between different materials listed above.
    - d. Perimeter joints between materials listed above and frames of doors, windows and louvers.
    - e. Other joints as indicated.
  2. Joint Sealant: Silicone, non-staining, S, NS, 50, NT.
- B. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal non-traffic surfaces.
  1. Joint Locations:
    - a. Control and expansion joints on exposed interior surfaces of exterior walls.
    - b. Perimeter joints of exterior openings where indicated.
    - c. Vertical joints on exposed surfaces of interior unit masonry and concrete walls and partitions.
    - d. Perimeter joints between interior wall surfaces and frames of interior doors, windows and elevator entrances.
    - e. Other joints as indicated.
  2. Joint Sealant: Latex.



END OF SECTION 079200



SECTION 084313 - ALUMINUM-FRAMED STOREFRONTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
  - 1. Aluminum-framed storefront systems.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: For aluminum-framed storefronts. Include plans, elevations, sections, full-size details, and attachments to other work.
  - 1. Include details of provisions for assembly expansion and contraction and for draining moisture occurring within the assembly to the exterior.
  - 2. Include full-size isometric details of each type of vertical-to-horizontal intersection of aluminum-framed storefronts, showing the following:
    - a. Joinery, including concealed welds.
    - b. Anchorage.
    - c. Expansion provisions.
    - d. Glazing.
    - e. Flashing and drainage.
  - 3. Show connection to and continuity with adjacent thermal, weather, air, and vapor barriers.
- C. Samples: For units with factory-applied color finishes.
- D. Delegated-Design Submittal: For aluminum-framed storefronts indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data:
  - 1. For Installer.
  - 2. For professional engineer's experience with providing delegated-design engineering services of the type indicated, including documentation that engineer is licensed in the state in which Project is located.
- B. Energy Performance Certificates: For aluminum-framed storefronts, accessories, and components, from manufacturer.
  - 1. Basis for Certification: NFRC-certified energy performance values for each aluminum-framed storefront.
- C. Product Test Reports: For aluminum-framed storefronts, for tests performed by a qualified testing agency.
- D. Source quality-control reports.
- E. Sample Warranties: For special warranties.

1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For aluminum-framed storefronts to include in maintenance manuals.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.
- B. Product Options: Information on Drawings and in Specifications establishes requirements for aesthetic effects and performance characteristics of assemblies. Aesthetic effects are indicated by dimensions, arrangements, alignment, and profiles of components and assemblies as they relate to sightlines, to one another, and to adjoining construction.
  - 1. Do not change intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If changes are proposed, submit comprehensive explanatory data to Architect for review.

1.8 MOCKUPS

- A. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.
  - 1. Build mockup of typical wall area as shown on Drawings.
  - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
  - 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

## 1.9 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of aluminum-framed storefronts that do not comply with requirements or that fail in materials or workmanship within specified warranty period.
1. Failures include, but are not limited to, the following:
    - a. Structural failures, including, but not limited to, excessive deflection.
    - b. Noise or vibration created by wind and thermal and structural movements.
    - c. Deterioration of metals and other materials beyond normal weathering.
    - d. Water penetration through fixed glazing and framing areas.
    - e. Failure of operating components.
  2. Warranty Period: Two (2) years from date of Substantial Completion.
- B. Special Finish Warranty, Anodized Finishes: Standard form in which manufacturer agrees to repair finishes or replace aluminum that shows evidence of deterioration of anodized finishes within specified warranty period.
1. Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Delta E units when tested in accordance with ASTM D 2244.
    - b. Chalking in excess of a No. 8 rating when tested in accordance with ASTM D 4214.
    - c. Cracking, peeling, or chipping.
  2. Warranty Period: Ten (10) years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Basis-of-Design Product:
1. Kawneer North America; **Trifab VG451T Framing Systems, GlassVent Windows**
- B. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. EFCO Corporation
  2. Oldcastle BuildingEnvelope
  3. TRACO
  4. YKK AP America Inc.
  5. Substitutions: Under provisions of Section 012500 "Substitution Procedures".
- C. Source Limitations: Obtain all components of aluminum-framed storefront system, including framing, spandrel panels, venting windows, and accessories, from single manufacturer.

## 2.2 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design aluminum-framed storefronts.
- B. General Performance: Comply with performance requirements specified, as determined by testing of aluminum-framed storefronts representing those indicated for this Project without failure due to defective manufacture, fabrication, installation, or other defects in construction.
  - 1. Aluminum-framed storefronts shall withstand movements of supporting structure, including, but not limited to, twist, column shortening, long-term creep, and deflection from uniformly distributed and concentrated live loads.
  - 2. Failure also includes the following:
    - a. Thermal stresses transferring to building structure.
    - b. Glass breakage.
    - c. Noise or vibration created by wind and thermal and structural movements.
    - d. Loosening or weakening of fasteners, attachments, and other components.
    - e. Failure of operating units.
- C. Structural Loads:
  - 1. Wind and other Design Loads: As indicated on Drawings, as required by Building Code and per authorities having jurisdiction.
- D. Deflection of Framing Members: At design wind pressure, as follows:
  - 1. Deflection Normal to Wall Plane: Limited to edge of glass in a direction perpendicular to glass plane not exceeding 1/175 of the glass edge length for each individual glazing lite or an amount that restricts edge deflection of individual glazing lites to 3/4-inch, whichever is less.
  - 2. Deflection Parallel to Glazing Plane: Limited to 1/360 of clear span or 1/8-inch, whichever is smaller.
    - a. Operable Units: Provide a minimum 1/16-inch clearance between framing members and operable units.
- E. Structural: Test in accordance with ASTM E 330 as follows:
  - 1. When tested at positive and negative wind-load design pressures, storefront assemblies do not evidence deflection exceeding specified limits.
  - 2. When tested at one hundred fifty percent (150%) of positive and negative wind-load design pressures, assemblies, including anchorage, do not evidence material failures, structural distress, or permanent deformation of main framing members exceeding 0.2 percent of span.
  - 3. Test Durations: As required by design wind velocity, but not less than 10 seconds.
- F. Water Penetration under Static Pressure: Test in accordance with ASTM E 331 as follows:
  - 1. No evidence of water penetration through fixed glazing and framing areas when tested in accordance with a minimum static-air-pressure differential of twenty percent (20%) of

positive wind-load design pressure, but not less than 8 lbf/sq. ft. for fixed areas and 15 lbf/sq. ft. for venting windows.

G. Energy Performance: Certified and labelled by manufacturer for energy performance as follows:

1. Thermal Transmittance (U-factor):
  - a. Fixed Glazing and Framing Areas: U-factor for the system of not more than 0.45 Btu/sq. ft. x h x deg F as determined in accordance with NFRC 100.
  - b. Venting Windows: Whole window U-factor of not more than 0.67 Btu/sq. ft. x h x deg F as determined in accordance with NFRC 100.
2. Solar Heat Gain Coefficient (SHGC):
  - a. Fixed Glazing and Framing Areas: SHGC for the system of not more than 0.35 as determined in accordance with NFRC 200.
  - b. Venting Windows: Whole window SHGC of not more than 0.35 as determined in accordance with NFRC 200.
3. Air Leakage:
  - a. Fixed Glazing and Framing Areas: Air leakage for the system of not more than 0.06 cfm/sq. ft. at a static-air-pressure differential of 6.24 lbf/sq. ft. when tested in accordance with ASTM E 283.
  - b. Venting Windows: Whole window air leakage of not more than 0.1 cfm/sq. ft. at a static-air-pressure differential of 6.24 lbf/sq. ft. when tested in accordance with AAMA/WDMA/CSA 101/I.S.2/A440.

H. Thermal Movements: Allow for thermal movements resulting from ambient and surface temperature changes.

1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

## 2.3 ALUMINUM-FRAMED STOREFRONT SYSTEMS

A. Framing Members: Manufacturer's extruded- or formed-aluminum framing members of thickness required and reinforced as required to support imposed loads.

1. Exterior Framing Construction: Thermally broken.
2. Glazing System: Retained mechanically with gaskets on four (4) sides.
3. Glazing Plane: Center.
4. Finish: Clear anodic finish.
5. Fabrication Method: Field-fabricated stick system.
6. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.
7. Steel Reinforcement: As required by manufacturer.

B. Backer Plates: Manufacturer's standard, continuous backer plates for framing members, if not integral, where framing abuts adjacent construction.

- C. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with non-staining, nonferrous shims for aligning system components.
- D. Venting Windows:
  - 1. Manufacturer's standard units, complying with AAMA/WDMA/CSA 101/I.S.2/A440, with self-flashing mounting fins, and as follows:
    - a. Window Type: Casement (Project-Out).
    - b. Minimum Performance Class: HC.
    - c. Minimum Performance Grade: 70.
    - d. Hardware: Manufacturer's standard; of aluminum, stainless-steel, die-cast steel, malleable iron, or bronze; including the following:
      - 1) Cam handle locking system.
      - 2) Pole-operated, cam handle locking system, where rail is more than 72 inches above floor.
      - 3) Steel or bronze operating arms.
    - e. Weather Stripping: Provide full-perimeter weather stripping for each operable sash unless otherwise indicated.
    - f. Glazing: Same as adjacent aluminum-framed storefront glazing.
    - g. Finish: Match adjacent aluminum-framed storefront finish.

## 2.4 GLAZING

- A. Glazing: Comply with Section 088000 "Glazing."

## 2.5 MATERIALS

- A. Sheet and Plate: ASTM B 209.
- B. Extruded Bars, Rods, Profiles, and Tubes: ASTM B 221.
- C. Steel Reinforcement:
  - 1. Structural Shapes, Plates, and Bars: ASTM A 36.
  - 2. Cold-Rolled Sheet and Strip: ASTM A 1008.
  - 3. Hot-Rolled Sheet and Strip: ASTM A 1011.
- D. Steel Reinforcement Primer: Manufacturer's standard zinc-rich, corrosion-resistant primer complying with SSPC-PS Guide No. 12.00; applied immediately after surface preparation and pretreatment. Select surface preparation methods in accordance with recommendations in SSPC-SP COM, and prepare surfaces in accordance with applicable SSPC standard.

## 2.6 ACCESSORIES

- A. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, non-staining, nonbleeding fasteners and accessories compatible with adjacent materials.
  - 1. Use self-locking devices where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration.



2. Reinforce members as required to receive fastener threads.
  3. Use exposed fasteners with countersunk Phillips screw heads, finished to match framing system.
- B. Anchors: Three-way adjustable anchors with minimum adjustment of 1-inch that accommodate fabrication and installation tolerances in material and finish compatible with adjoining materials and recommended by manufacturer.
1. Concrete and Masonry Inserts: Hot-dip galvanized cast-iron, malleable-iron, or steel inserts complying with ASTM A 123 or ASTM A 153 requirements.
- C. Concealed Flashing: Manufacturer's standard corrosion-resistant, non-staining, nonbleeding flashing compatible with adjacent materials.
- D. Bituminous Paint: Cold-applied asphalt-mastic paint containing no asbestos, formulated for 30-mil thickness per coat.
- E. Rigid PVC Filler.

## 2.7 FABRICATION

- A. Form or extrude aluminum shapes before finishing.
- B. Weld in concealed locations to greatest extent possible to minimize distortion or discoloration of finish. Remove weld spatter and welding oxides from exposed surfaces by descaling or grinding.
- C. Fabricate components that, when assembled, have the following characteristics:
1. Profiles that are sharp, straight, and free of defects or deformations.
  2. Accurately fitted joints with ends coped or mitered.
  3. Physical and thermal isolation of glazing from framing members.
  4. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.
  5. Provisions for field replacement of glazing from interior for vision glass and exterior for spandrel glazing or metal panels.
  6. Fasteners, anchors, and connection devices that are concealed from view to greatest extent possible.
- D. Mechanically Glazed Framing Members: Fabricate for flush glazing without projecting stops.
- E. Storefront Framing: Fabricate components for assembly using screw-spline system.
- F. After fabrication, clearly mark components to identify their locations in Project in accordance with Shop Drawings.

## 2.8 ALUMINUM FINISHES

- A. Clear Anodic Finish: AAMA 611, AA-M12C22A41, Class I, 0.018 mm or thicker.

---

PART 3 - EXECUTION

## 3.1 EXAMINATION

- A. Examine areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

## 3.2 INSTALLATION, GENERAL

- A. Comply with manufacturer's written instructions.
- B. Do not install damaged components.
- C. Fit joints to produce hairline joints free of burrs and distortion.
- D. Rigidly secure nonmovement joints.
- E. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration and to prevent impeding movement of moving joints.
- F. Seal perimeter and other joints watertight unless otherwise indicated.
- G. Metal Protection:
  - 1. Where aluminum is in contact with dissimilar metals, protect against galvanic action by painting contact surfaces with materials recommended by manufacturer for this purpose or by installing nonconductive spacers.
  - 2. Where aluminum is in contact with concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.
- H. Set continuous sill members and flashing in full sealant bed, as specified in Section 079200 "Joint Sealants," to produce weathertight installation.
- I. Install joint filler behind sealant as recommended by sealant manufacturer.
- J. Install components plumb and true in alignment with established lines and grades.

## 3.3 INSTALLATION OF OPERABLE UNITS

- A. Install operable units level and plumb, securely anchored, and without distortion. Adjust weather-stripping contact and hardware movement to produce proper operation.

## 3.4 INSTALLATION OF GLAZING

- A. Install glazing as specified in Section 088000 "Glazing."

## 3.5 ERECTION TOLERANCES

- A. Install aluminum-framed storefronts to comply with the following maximum tolerances:

1. Plumb: 1/8-inch in 10 feet; 1/4-inch in 40 feet.
2. Level: 1/8-inch in 20 feet; 1/4-inch in 40 feet.
3. Alignment:
  - a. Where surfaces abut in line or are separated by reveal or protruding element up to 1/2 inch wide, limit offset from true alignment to 1/16-inch.
  - b. Where surfaces are separated by reveal or protruding element from 1/2- to 1-inch-wide, limit offset from true alignment to 1/8-inch.
  - c. Where surfaces are separated by reveal or protruding element of 1-inch-wide or more, limit offset from true alignment to 1/4-inch.
4. Location: Limit variation from plane to 1/8- inch in 12 feet; 1/2-inch over total length.

END OF SECTION 084313



## SECTION 088000 - GLAZING

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. Section includes:
  - 1. Glass for windows and storefront framing.
  - 2. Glazing sealants and accessories.

## 1.3 DEFINITIONS

- A. Glass Manufacturers: Firms that produce primary glass, fabricated glass, or both, as defined in referenced glazing publications.
- B. Glass Thicknesses: Indicated by thickness designations according to ASTM C 1036.
- C. IBC: International Building Code.
- D. Interspace: Space between lites of an insulating-glass unit.

## 1.4 COORDINATION

- A. Coordinate glazing channel dimensions to provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances.

## 1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Glass Samples: For each type of glass product other than clear monolithic vision glass; 12 inches square.
- C. Glazing Accessory Samples: For gaskets and sealants, in 12-inch lengths. Install sealant Samples between two (2) strips of material representative in color of the adjoining framing system.
- D. Glazing Schedule: List glass types and thicknesses for each size opening and location. Use same designations indicated on Drawings.

## 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For installers, glass testing agency and sealant testing agency.

- 
- B. Product Test Reports: For tinted glass, coated glass, insulating glass, glazing sealants and glazing gaskets.
    - 1. For glazing sealants, provide test reports based on testing current sealant formulations within previous 36-month period.
  - C. Preconstruction adhesion and compatibility test report.
  - D. Sample Warranties: For special warranties.

#### 1.7 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified installer who employs glass installers for this Project who are certified under the National Glass Association's Certified Glass Installer Program.
- B. Glass Testing Agency Qualifications: A qualified independent testing agency accredited according to the NFRC CAP 1 Certification Agency Program.
- C. Sealant Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated.
- D. Mockups: Build mockups to demonstrate aesthetic effects and to set quality standards for materials and execution.
  - 1. Install glazing in mockups specified in Section 084313 "Aluminum-Framed Storefronts" to match glazing systems required for Project, including glazing methods.

#### 1.8 PRECONSTRUCTION TESTING

- A. Preconstruction Adhesion and Compatibility Testing: Test each glass product, tape sealant, gasket, glazing accessory, and glass-framing member for adhesion to and compatibility with elastomeric glazing sealants.
  - 1. Testing is not required if data are submitted based on previous testing of current sealant products and glazing materials matching those submitted.
  - 2. Use ASTM C 1087 to determine whether priming and other specific joint-preparation techniques are required to obtain rapid, optimum adhesion of glazing sealants to glass, tape sealants, gaskets, and glazing channel substrates.
  - 3. Test no fewer than eight (8) Samples of each type of material, including joint substrates, shims, sealant backings, secondary seals, and miscellaneous materials.
  - 4. Schedule sufficient time for testing and analyzing results to prevent delaying the Work.
  - 5. For materials failing tests, submit sealant manufacturer's written instructions for corrective measures including the use of specially formulated primers.

#### 1.9 DELIVERY, STORAGE, AND HANDLING

- A. Protect glazing materials according to manufacturer's written instructions. Prevent damage to glass and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes.

- 
- B. Comply with insulating-glass manufacturer's written recommendations for venting and sealing units to avoid hermetic seal ruptures due to altitude change.

#### 1.10 FIELD CONDITIONS

- A. Environmental Limitations: Do not proceed with glazing when ambient and substrate temperature conditions are outside limits permitted by glazing material manufacturers and when glazing channel substrates are wet from rain, frost, condensation, or other causes.
  - 1. Do not install glazing sealants when ambient and substrate temperature conditions are outside limits permitted by sealant manufacturer or below 40 deg F (4.4 deg C).

#### 1.11 WARRANTY

- A. Manufacturer's Special Warranty for Coated-Glass Products: Manufacturer agrees to replace coated-glass units that deteriorate within specified warranty period. Deterioration of coated glass is defined as defects developed from normal use that are not attributed to glass breakage or to maintaining and cleaning coated glass contrary to manufacturer's written instructions. Defects include peeling, cracking, and other indications of deterioration in coating.
  - 1. Warranty Period: Ten (10) years from date of Substantial Completion.
- B. Manufacturer's Special Warranty on Insulating Glass: Manufacturer agrees to replace insulating-glass units that deteriorate within specified warranty period. Deterioration of insulating glass is defined as failure of hermetic seal under normal use that is not attributed to glass breakage or to maintaining and cleaning insulating glass contrary to manufacturer's written instructions. Evidence of failure is the obstruction of vision by dust, moisture, or film on interior surfaces of glass.
  - 1. Warranty Period: Ten (10) years from date of Substantial Completion.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  - 1. Cardinal Glass Industries
  - 2. DuPont™ Building Innovations
  - 3. Oldcastle BuildingEnvelope
  - 4. PPG Industries, Inc.
  - 5. Viracon, Inc.
  - 6. Substitutions: Under provisions of Section 012500 "Substitution Procedures".
- B. Source Limitations for Glass: Obtain from single source from single manufacturer for each glass type.
- C. Source Limitations for Glazing Accessories: Obtain from single source from single manufacturer for each product and installation method.

---

## 2.2 PERFORMANCE REQUIREMENTS

- A. General: Installed glazing systems shall withstand normal thermal movement and wind and impact loads (where applicable) without failure, including loss or glass breakage attributable to the following: defective manufacture, fabrication, or installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.
- B. Structural Performance: Glazing shall withstand the following design loads within limits and under conditions indicated determined according to the IBC and ASTM E 1300.
  - 1. Design Wind Pressures: As indicated on Drawings, required by Building Code or per authorities having jurisdiction.
  - 2. Maximum Lateral Deflection: For glass supported on all four (4) edges, limit center-of-glass deflection at design wind pressure to not more than 1/50 times the short-side length or 1-inch, whichever is less.
  - 3. Differential Shading: Design glass to resist thermal stresses induced by differential shading within individual glass lites.
- C. Safety Glazing: Where safety glazing is indicated, provide glazing that complies with 16 CFR 1201, Category II.
- D. Thermal and Optical Performance Properties: Provide glass with performance properties specified, as indicated in manufacturer's published test data, based on procedures indicated below:
  - 1. For monolithic-glass lites, properties are based on units with lites of thickness indicated.
  - 2. For insulating-glass units, properties are based on units of thickness indicated for overall unit and for each lite.
  - 3. U-Factors: Center-of-glazing values, according to NFRC 100 and based on LBL's WINDOW 5.2 computer program, expressed as Btu/sq. ft. x h x deg F.
  - 4. Solar Heat-Gain Coefficient and Visible Transmittance: Center-of-glazing values, according to NFRC 200 and based on LBL's WINDOW 5.2 computer program.
  - 5. Visible Reflectance: Center-of-glazing values, according to NFRC 300.

## 2.3 GLASS PRODUCTS, GENERAL

- A. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below, unless more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced standards.
  - 1. GANA Publications: GANA's "Glazing Manual."
  - 2. IGMA Publication for Insulating Glass: SIGMA TM-3000, "North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial and Residential Use."
- B. Safety Glazing Labeling: Where safety glazing is indicated, permanently mark glazing with certification label of the SGCC or another certification agency acceptable to authorities having jurisdiction. Label shall indicate manufacturer's name, type of glass, thickness, and safety glazing standard with which glass complies.



- C. Insulating-Glass Certification Program: Permanently marked either on spacers or on at least one (1) component lite of units with appropriate certification label of IGCC.
- D. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass that complies with performance requirements and is not less than the thickness indicated.
- E. Strength: Where float glass is indicated, provide annealed float glass, Kind HS heat-treated float glass, or Kind FT heat-treated float glass. Where heat-strengthened glass is indicated, provide Kind HS heat-treated float glass or Kind FT heat-treated float glass. Where fully tempered glass is indicated, provide Kind FT heat-treated float glass.

## 2.4 GLASS PRODUCTS

- A. Clear Annealed Float Glass: ASTM C 1036, Type I, Class 1 (clear), Quality-Q3.
- B. Fully Tempered Float Glass: ASTM C 1048, Kind FT (fully tempered), Condition A (uncoated) unless otherwise indicated, Type I, Class 1 (clear) or Class 2 (tinted) as indicated, Quality-Q3.
  - 1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed unless otherwise indicated.
- C. Heat-Strengthened Float Glass: ASTM C 1048, Kind HS (heat strengthened), Type I, Condition A (uncoated) unless otherwise indicated, Type I, Class 1 (clear) or Class 2 (tinted) as indicated, Quality-Q3.
  - 1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed unless otherwise indicated.
  - 2. For uncoated glass, comply with requirements for Condition A.
  - 3. For coated vision glass, comply with requirements for Condition C (other coated glass).

## 2.5 INSULATING GLASS

- A. Insulating-Glass Units: Factory-assembled units consisting of sealed lites of glass separated by a dehydrated interspace, qualified according to ASTM E 2190.
  - 1. Sealing System: Dual seal, with polyisobutylene and silicone primary and secondary.
  - 2. Perimeter Spacer: Manufacturer's standard spacer material and construction.

## 2.6 GLAZING GASKETS

- A. Dense Compression Gaskets: Molded or extruded gaskets of profile and hardness required to maintain watertight seal, made from one (1) of the following:
  - 1. EPDM complying with ASTM C 864.
  - 2. Silicone complying with ASTM C 1115.
  - 3. Thermoplastic polyolefin rubber complying with ASTM C 1115.
- B. Soft Compression Gaskets: Extruded or molded, closed-cell, integral-skinned EPDM, silicone or thermoplastic polyolefin rubber gaskets complying with ASTM C 509, Type II, black; of profile and hardness required to maintain watertight seal.

1. Application: Use where soft compression gaskets will be compressed by inserting dense compression gaskets on opposite side of glazing or pressure applied by means of pressure-glazing stops on opposite side of glazing.
- C. Lock-Strip Gaskets: Neoprene extrusions in size and shape indicated, fabricated into frames with molded corner units and zipper lock-strips, complying with ASTM C 542, black.

## 2.7 GLAZING SEALANTS

### A. General:

1. Compatibility: Compatible with one another and with other materials they will contact, including glass products, seals of insulating-glass units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
2. Suitability: Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.
3. Sealants used inside the weatherproofing system, shall have a VOC content of not more than 250 g/L when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
4. Colors of Exposed Glazing Sealants: As selected by Architect and Owner from manufacturer's full range, to match adjacent.

### B. Glazing Sealant: Neutral-curing silicone glazing sealant complying with ASTM C 920, Type S, Grade NS, Class 100/50, Use NT.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
  - a. Dow Corning Corporation; **790**
  - b. Pecora Corporation; **890**
  - c. Tremco Incorporated; **Spectrem 1**
  - d. Substitutions: Under provisions of Section 012500 "Substitution Procedures".

## 2.8 GLAZING TAPES

### A. Back-Bedding Mastic Glazing Tapes: Preformed, butyl-based, one hundred percent (100%) solids elastomeric tape; non-staining and non-migrating in contact with nonporous surfaces; with or without spacer rod as recommended in writing by tape and glass manufacturers for application indicated; and complying with ASTM C 1281 and AAMA 800 for products indicated below:

1. AAMA 806.3 tape, for glazing applications in which tape is subject to continuous pressure.

## 2.9 MISCELLANEOUS GLAZING MATERIALS

### A. General: Provide products of material, size, and shape complying with referenced glazing standard, with requirements of manufacturers of glass and other glazing materials for application indicated, and with a proven record of compatibility with surfaces contacted in installation.

- B. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.
- C. Setting Blocks: Elastomeric material with a Shore, Type A durometer hardness of 85, plus or minus 5.
- D. Spacers: Elastomeric blocks or continuous extrusions of hardness required by glass manufacturer to maintain glass lites in place for installation indicated.
- E. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side walking).
- F. Cylindrical Glazing Sealant Backing: ASTM C 1330, Type O (open-cell material), of size and density to control glazing sealant depth and otherwise produce optimum glazing sealant performance.

## 2.10 FABRICATION

- A. Fabricate glazing units in sizes required to fit openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with written instructions of product manufacturer and referenced glazing publications, to comply with system performance requirements.
  - 1. Allow for thermal movements from ambient and surface temperature changes acting on glass framing members and glazing components.
    - a. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.
- B. Clean-cut or flat-grind vertical edges of butt-glazed monolithic lites to produce square edges with slight chamfers at junctions of edges and faces.
- C. Grind smooth and polish exposed glass edges and corners.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine framing, glazing channels, and stops, with Installer present, for compliance with the following:
  - 1. Manufacturing and installation tolerances, including those for size, squareness, and offsets at corners.
  - 2. Presence and functioning of weep systems.
  - 3. Minimum required face and edge clearances.
  - 4. Effective sealing between joints of glass-framing members.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

---

### 3.2 PREPARATION

- A. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings not firmly bonded to substrates.
- B. Examine glazing units to locate exterior and interior surfaces. Label or mark units as needed so that exterior and interior surfaces are readily identifiable. Do not use materials that leave visible marks in the completed work.

### 3.3 GLAZING, GENERAL

- A. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.
- B. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass includes glass with edge damage or other imperfections that, when installed, could weaken glass, impair performance, or impair appearance.
- C. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction testing.
- D. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.
- E. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.
- F. Provide spacers for glass lites where length plus width is larger than 50 inches.
  - 1. Locate spacers directly opposite each other on both inside and outside faces of glass. Install correct size and spacing to preserve required face clearances, unless gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and to comply with system performance requirements.
  - 2. Provide 1/8-inch minimum bite of spacers on glass and use thickness equal to sealant width. With glazing tape, use thickness slightly less than final compressed thickness of tape.
- G. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to requirements in referenced glazing publications.
- H. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.
- I. Set glass lites with proper orientation so that coatings face exterior or interior as specified.
- J. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on opposite side, provide adequate anchorage so gasket cannot walk out when installation is subjected to movement.

- K. Square cut wedge-shaped gaskets at corners and install gaskets in a manner recommended by gasket manufacturer to prevent corners from pulling away; seal corner joints and butt joints with sealant recommended by gasket manufacturer.

### 3.4 TAPE GLAZING

- A. Position tapes on fixed stops so that, when compressed by glass, their exposed edges are flush with or protrude slightly above sightline of stops.
- B. Install tapes continuously, but not necessarily in one (1) continuous length. Do not stretch tapes to make them fit opening.
- C. Cover vertical framing joints by applying tapes to heads and sills first and then to jambs. Cover horizontal framing joints by applying tapes to jambs and then to heads and sills.
- D. Place joints in tapes at corners of opening with adjoining lengths butted together, not lapped. Seal joints in tapes with compatible sealant approved by tape manufacturer.
- E. Do not remove release paper from tape until right before each glazing unit is installed.
- F. Apply heel bead of elastomeric sealant.
- G. Center glass lites in openings on setting blocks and press firmly against tape by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings.
- H. Apply cap bead of elastomeric sealant over exposed edge of tape.

### 3.5 GASKET GLAZING (DRY)

- A. Cut compression gaskets to lengths recommended by gasket manufacturer to fit openings exactly, with allowance for stretch during installation.
- B. Insert soft compression gasket between glass and frame or fixed stop so it is securely in place with joints miter cut and bonded together at corners.
- C. Installation with Drive-in Wedge Gaskets: Center glass lites in openings on setting blocks and press firmly against soft compression gasket by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.
- D. Installation with Pressure-Glazing Stops: Center glass lites in openings on setting blocks and press firmly against soft compression gasket. Install dense compression gaskets and pressure-glazing stops, applying pressure uniformly to compression gaskets. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.
- E. Install gaskets so they protrude past face of glazing stops.

---

### 3.6 SEALANT GLAZING (WET)

- A. Install continuous spacers, or spacers combined with cylindrical sealant backing, between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel and blocking weep systems until sealants cure. Secure spacers or spacers and backings in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.
- B. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.
- C. Tool exposed surfaces of sealants to provide a substantial wash away from glass.

### 3.7 CLEANING AND PROTECTION

- A. Immediately after installation remove nonpermanent labels and clean surfaces.
- B. Protect glass from contact with contaminating substances resulting from construction operations. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for buildup of dirt, scum, alkaline deposits, or stains.
  - 1. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended in writing by glass manufacturer. Remove and replace glass that cannot be cleaned without damage to coatings.
- C. Remove and replace glass that is damaged during construction period.
- D. Wash glass on both exposed surfaces not more than four (4) days before date scheduled for inspections that establish date of Substantial Completion. Wash glass as recommended in writing by glass manufacturer.

### 3.8 DECORATIVE FILM SCHEDULE

- A. Decorative Film **GL-0**: Not used.

### 3.9 MONOLITHIC-GLASS SCHEDULE

- A. Glass Type **GL-1**: Not used.
- B. Glass Type **GL-2**: Not used.
- C. Glass Type **GL-3**: Not used.
- D. Glass Type **GL-4**: Not used.

### 3.10 LAMINATED GLASS SCHEDULE

- A. Glass Type **GL-5**: Not used.
- B. Glass Type **GL-7**: Not used.

- C. Glass Type **GL-22**: Not used.

### 3.11 INSULATING-GLASS SCHEDULE

- A. Glass Type **GL-9**: Low-e-coated, clear insulating glass.

1. Overall Unit Thickness: 1-inch.
2. Thickness of Each Glass Lite: 1/4-inch.
3. Outdoor Lite: Float glass.
4. Interspace Content: Argon.
5. Indoor Lite: Float glass.
6. Low-E Coating: Pyrolytic on second surface.

- B. Glass Type **GL-10**: Not used.

- C. Glass Type **GL-11**: Not used.

- D. Glass Type **GL-12**: Not used.

- E. Glass Type **GL-13**: Not used.

- F. Glass Type **GL-14**: Not used.

- G. Glass Type **GL-15**: Not used.

- H. Glass Type **GL-16**: Not used.

- I. Glass Type **GL-18**: Not used.

- J. Glass Type **GL-20**: Not used.

- K. Glass Type **GL-25**: Not used.

- L. Glass Type **GL-26**: Not used.

- M. Glass Type **GL-32**: Not used.

### 3.12 INSULATING-LAMINATED-GLASS TYPES

- A. Glass Type **GL-17**: Not used.

- B. Glass Type **GL-19**: Not used.

- C. Glass Type **GL-21**: Not used.

- D. Glass Type **GL-23**: Not used.

- E. Glass Type **GL-27**: Not used.

- F. Glass Type **GL-28**: Not used.

- G. Glass Type **GL-29**: Not used.

H. Glass Type **GL-30**: Not used.

I. Glass Type **GL-31**: Not used.

3.13 FIRE-RESISTANCE-RATED GLAZING TYPES

A. Glass Type **GL-6**: Not used.

B. Glass Type **GL-8**: Not used.

C. Glass Type **GL-24**: Not used.

D. Glass Type **GL-33**: Not used.

END OF SECTION 088000



SECTION 101400 - SIGNAGE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
  - 1. Field-applied, vinyl-character signs.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples: Manufacturer's color charts consisting of actual units or sections of units showing the full range of colors available for the following:
  - 1. Field-Applied, Vinyl-Character Signs: Full-size Sample of characters on glass.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For manufacturer.
- B. Sample Warranty: For special warranty.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For signs to include in maintenance manuals.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.

1.7 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of signs that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Deterioration of finishes beyond normal weathering.
    - b. Deterioration of embedded graphic image
    - c. Separation or delamination of sheet material and components.

2. Warranty Period: Five (5) years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Thermal Movements: For exterior signs, allow for thermal movements from ambient and surface temperature changes.
  1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.
- B. Accessibility Standard: Comply with applicable provisions in the ABA standards of the Federal agency having jurisdiction and ICC/ANSI A117.1.
- C. Source Limitations for Signs: Obtain each sign type indicated from one (1) source from a single manufacturer.

### 2.2 FIELD-APPLIED, VINYL-CHARACTER SIGNS

- A. Field-Applied, Vinyl-Character Sign: Prespaced characters die cut from 3- to 3.5-mil thick, weather-resistant vinyl film with release liner on the back and carrier film on the front for on-site alignment and application.
  1. Manufacturers: Subject to compliance with requirements, available products by one (1) of the following:
    - a. Apco Graphics
    - b. FDC Graphic Films
    - c. LG Hausys America
    - d. Substitutions: Under provisions of Section 012500 "Substitution Procedures".
  2. Size: As indicated on Drawings.
  3. Substrate: Glass.
  4. Text and Font: As indicated on Drawings; Helvetica.

### 2.3 MATERIALS

- A. Vinyl Film: UV-resistant vinyl film of nominal thickness indicated, with pressure-sensitive, permanent adhesive on back; die cut to form characters or images as indicated and suitable for exterior applications.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. General: Install signs and accessories using mounting methods indicated and according to manufacturer's written instructions.
  - 1. Install signs level, plumb, true to line, and at locations and heights indicated, with sign surfaces free of distortion and other defects in appearance.
  - 2. Before installation, verify that sign surfaces are clean and free of materials or debris that would impair installation.
- B. Field-Applied, Vinyl-Character Signs: Clean and dry substrate. Align sign characters in final position before removing release liner. Remove release liner in stages, and apply and firmly press characters into final position. Press from the middle outward to obtain good bond without blisters or fishmouths. Remove carrier film without disturbing applied vinyl film.

### 3.3 ADJUSTING AND CLEANING

- A. Remove and replace damaged or deformed signs and signs that do not comply with specified requirements.
- B. Remove temporary protective coverings and strippable films as signs are installed.
- C. On completion of installation, clean exposed surfaces of signs according to manufacturer's written instructions. Maintain signs in a clean condition during construction and protect from damage until acceptance by Owner.

END OF SECTION 101400