



Weston & SampsonSM

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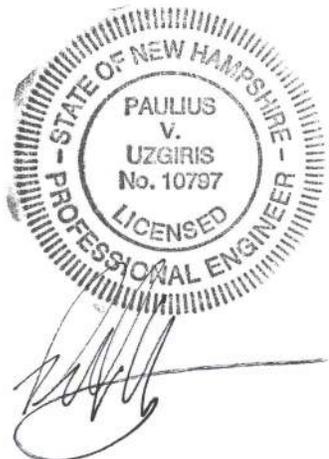
CONTRACT
DOCUMENTS

JANUARY 2025

SPECIFICATIONS
Town of Jaffrey, New
Hampshire

ABATEMENT AND DEMOLITION OF
FORMER W.W. CROSS PROPERTY

39 WEBSTER STREET
JAFFREY, NEW HAMPSHIRE 03452



**SPECIFICATIONS
TABLE OF CONTENTS**

00 PROCUREMENT AND CONTRACTING REQUIREMENTS

Advertisement for Bids	A-1
Information for Bidders	A-2
Bid Form	A-3
Bid Bond	A-4
Supplemental Instructions to Bidders (EPA Funded Projects)	A-5
Payment Bond	B-1
Performance Bond	B-2
Change Order	B-3
Certificate of Substantial Completion	B-4

01 GENERAL REQUIREMENTS

Control of Work and Materials	01 11 00
Scope and Sequence of Work	01 12 16
Special Provisions	01 14 00
Dust Control	01 14 19.16
Measurement and Payment	01 22 00
Permits	01 31 43
Construction Scheduling	01 32 16
Submittals	01 33 23
Health and Safety Plan	01 35 29
Schedule of Values	01 37 00
Temporary Facilities	01 52 13
Signage	01 55 26.13
Temporary Chain Link Fence	01 56 26
Pest Control	01 57 16
Environmental Protection	01 57 19
Cleaning Up	01 74 13
Project Closeout	01 78 00

02 SITE WORK

Utility Abandonment	02 41 13.36
Demolition	02 41 16
Removal of Universal and Hazardous Waste from Buildings	02 80 00.13
Asbestos Abatement	02 82 33
Lead-Based Coatings Removal	02 83 19

31 EARTHWORK

Earthwork	31 00 00
Clearing and Grubbing	31 11 00
Support of Excavation	31 50 00

33 UTILITIES

Television Inspection of Pipes

33 01 30.16

APPENDICES:

Appendix A – *Hazardous Building Materials Inventory* (Ransom, 2017)

Appendix B – U.S. Environmental Protection Agency Cooperative Agreement

Appendix C – Federal Wage Determinations

END OF SECTION

ADVERTISEMENT FOR BIDS

Owner Name: Town of Jaffrey		Project Number: 2025-1		
Project Address:	39 Webster Street	Jaffrey	NH	03452
	Street # and name	City/Town	State	ZIP

Separate sealed BIDS for the project: *Abatement and Demolition of Former W.W. Cross Property* will be received by the Town of Jaffrey at the Town Hall, 10 Goodnow Street, Jaffrey NH, 03452 until 2:00 P.M. local time on February 12, 2025 and then at said office publicly opened and read aloud.

The scope of work includes, but is not limited to, the abovegrade demolition and disposal of the remaining 74,000 square feet of an existing approximately 116,000 square-foot single story mixed use building constructed of steel and wood framing and miscellaneous appurtenances, including but not limited to an aboveground storage tank (AST) and its enclosure building and three transformers. For additional information see Section 01 12 16 – Scope and Sequence of Work.

1. Completion time for the project will be calculated as calendar days from the date specified in the “Notice to Proceed” as follows:
 90 Calendar Days for substantial completion.
 120 Calendar Days for final completion.
 Liquidated damages will be in the amount of \$1,500, for each calendar day of delay from the date established for substantial completion, and \$1,500 for each calendar day of delay from the date established for final completion.
2. Each General Bid shall be accompanied by a Bid Security in the amount of 5% of the Total Bid Price.
3. The successful Bidder must furnish 100% Performance and Payment Bonds and will be required to execute the Contract Agreement within 10 days following notification of the acceptance of their Bid.
4. A pre-bid conference will be held on January 28, 2025 at 10:00 AM at the project site located at 39 Webster Street, Jaffrey, New Hampshire 03452. The conference is not required to submit a bid, but attendance is strongly encouraged.
5. Technical questions can be directed electronically to Peter Botticello at W&S at Botticello.Peter@wseinc.com through February 4, 2025 at 2:00 PM.
6. Contract Documents may be viewed free of charge at www.constructionsummary.com. PDF copies may be obtained for a fee by completing an order online or by calling 603-627-8856 for each set. All payments for obtaining copies are nonrefundable. Interested bidders should notify Peter Botticello via email at Botticello.Peter@wseinc.com after viewing the Contract Documents to guarantee receipt of addenda. Bidders shall provide W&S the Contractor name, phone number, and email for addenda to be sent to. Viewing or purchasing copies from Construction Summary of NH **does not** guarantee receipt of addenda. Interested bidders will be prompted to register an email address with Construction Summary of NH to access the documents.
7. The Town of Jaffrey reserves the right to reject any and all bids, and to waive any informality or formality in the bidding process. No bids shall be withdrawn less than thirty (30) days after the scheduled bid opening without prior consent of the Town. The Town also reserves the right to investigate the ability of all bidders to successfully complete their proposals. To be considered for this request for services you must provide the Town of Jaffrey with a Certificate of Insurance that shows toy carry liability insurance of at least \$1,000,000 or more, Additionally, your form is responsible for providing a

ADVERTISEMENT FOR BIDS

Weston & Sampson Engineers, Inc.

BID

January 15, 2025

Town of Jaffrey

Abatement and Demolition of Former W.W. Cross Property

IFB #2025-1

Certificate of Insurance which shows coverage of Workers' Compensation. Insurance coverage shall remain in effect for the duration of services performed.

The Owner reserves the right to waive any informality or to reject any or all bids when such action is deemed in the best interest of the Owner. Non-responsive and/or unbalanced bids may be rejected.

END OF SECTION

ADVERTISEMENT FOR BIDS

A-1 - Page 2 of 2

INFORMATION FOR BIDDERS

Bids will be received by: The Town of Jaffrey, New Hampshire herein called the "OWNER" at:

Address: 10 Goodnow Street, Jaffrey NH 03452

Until 2:00 PM local time on Friday, February 12, 2025 and then at said office publicly opened and read aloud.

The schedule is expected to proceed as follows:

Contract Documents available:	January 15, 2025
Pre-Bid Meeting and Site Visit:	January 28, 2025 at 10:00 AM
Deadline for questions:	February 4, 2025 at 5:00 PM
Answers to questions by:	February 7, 2025 at 5:00 PM
Bids due:	February 12, 2025 by 2:00 PM

Each BID must be submitted in a sealed envelope, addressed to:

Department of Planning and Economic Development, attention Jo Anne Carr, at 10 Goodnow Street, Jaffrey NH, 03452.

Each sealed envelope containing a BID must be plainly marked on the outside as BID for the *Abatement and Demolition of Former W.W. Cross Property* and the envelope should bear on the outside the BIDDER's name, address and license number if applicable and the name of the project for which the BID is submitted. If forwarded by mail, the sealed envelope containing the BID must be enclosed in another envelope addressed to the OWNER at the Department of Planning and Economic Development, attention Jo Anne Carr, 10 Goodnow Street, Jaffrey NH, 03452.

All BIDS must be made on the required BID form. All blank spaces for BID prices must be filled in, in ink or typewritten, in both written words and figures, and the BID form must be fully completed and executed when submitted. Only one copy of the BID form is required.

The OWNER may waive any informalities or minor defects or reject all BIDS. Any BID may be withdrawn prior to the above scheduled time for the opening of BIDS or authorized postponement thereof. Any BID received after the time and date specified shall not be considered. No BIDDER may withdraw a BID less than 30 days after the actual date of the opening thereof. Should there be reasons why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the OWNER and the BIDDER.

BIDDERS must satisfy themselves of the accuracy of the estimated quantities in the BID SCHEDULE by examination of the site and a review of the drawings and specifications including ADDENDA. After BIDS have been submitted, the BIDDER shall not assert that there was a misunderstanding concerning the quantities of WORK or of the nature of the WORK to be done.

The OWNER shall provide to BIDDERS prior to BIDDING, all information which is pertinent to, and delineates and describes, the land owned and rights-of-way acquired or to be acquired.

The CONTRACT DOCUMENTS contain the provisions required for the construction of the PROJECT. Information obtained from an officer, agent, or employee of the OWNER or any other person shall not affect the risks or obligations assumed by the CONTRACTOR or relieve them from fulfilling any of the conditions of the contract.

Each BID must be accompanied by a BID BOND payable to the OWNER in the amount of five percent (5%) of the total amount of the BID. As soon as the BID prices have been compared, the OWNER will return the

INFORMATION FOR BIDDERS

BONDS of all except the three lowest responsive BIDDERS. When the AGREEMENT is executed, the bonds of the two remaining unsuccessful BIDDERS will be returned. The BID BOND of the successful BIDDER will be retained until the PAYMENT BOND and PERFORMANCE BOND have been executed and approved, after which it will be returned. A certified check may be used in lieu of a BID BOND.

A PERFORMANCE BOND and a PAYMENT BOND, each in the amount of 100 percent of the CONTRACT PRICE, with a corporate surety approved by the OWNER, will be required for the faithful performance of the contract.

Attorneys-in-fact who sign BID BONDS or PAYMENT BONDS and PERFORMANCE BONDS must file with each BOND a certified and effective dated copy of their power of attorney.

The party to whom the contract is awarded will be required to execute the AGREEMENT and obtain the PAYMENT BOND and PERFORMANCE BOND within ten (10) calendar days from the date when NOTICE OF AWARD is delivered to the BIDDER. The NOTICE OF AWARD shall be accompanied by the necessary AGREEMENT and BOND forms. In case of failure of the BIDDER to execute the AGREEMENT, the OWNER may at their option consider the BIDDER in default, in which case the BID BOND accompanying the proposal shall become the property of the OWNER.

The OWNER within ten (10) days of receipt of acceptable PAYMENT BOND, PERFORMANCE BOND and AGREEMENT signed by the party to whom the AGREEMENT was awarded shall sign the AGREEMENT and return to such party an executed duplicate of the AGREEMENT. Should the OWNER not execute the AGREEMENT within such period, the BIDDER may by WRITTEN NOTICE withdraw their signed AGREEMENT. Such notice of withdrawal shall be effective upon receipt of the notice by the OWNER.

The NOTICE TO PROCEED shall be issued within ten (10) days of the execution of the Agreement by the OWNER. Should there be reasons why the NOTICE TO PROCEED cannot be issued within such period, the time may be extended by mutual agreement between the OWNER and CONTRACTOR. If the NOTICE TO PROCEED has not been issued within the ten (10) day period or within the period mutually agreed upon, the CONTRACTOR may terminate the AGREEMENT without further liability on the part of either party.

The OWNER may make such investigations as Owner deems necessary to determine the ability of the BIDDER to perform the WORK, and the BIDDER shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. The OWNER reserves the right to reject any BID if the evidence submitted by, or investigation of, such BIDDER fails to satisfy the OWNER that such BIDDER is properly qualified to carry out the obligations of the AGREEMENT and to complete the WORK contemplated therein.

A conditional or qualified BID will not be accepted.

Award will be made to the lowest responsive and responsible BIDDER.

All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the PROJECT shall apply to the contract throughout.

Each BIDDER is responsible for inspecting the site and for reading and being thoroughly familiar with the CONTRACT DOCUMENTS. The failure or omission of any BIDDER to complete any of the foregoing shall in no way relieve any BIDDER from any obligation in respect to their BID.

The low BIDDER shall supply the names and addresses of major material SUPPLIERS and SUBCONTRACTORS when requested to do so by the OWNER.

INFORMATION FOR BIDDERS

Notice to Bidders: The Site is a regulated Site by the New Hampshire Department of Environmental Services (NHDES). Site files can be seen at NHDES online database ONESTOP, Site #198708007. The CONTRACTOR is responsible for the health and safety of its employees.

ENVIRONMENTAL PROTECTION AGENCY COMPLIANCE

This project is funded by the United States Environmental Protection Agency (USEPA) and a copy of their Cooperative Agreement with the Town of Jaffrey, including administrative requirements of this contract, is included as an attachment to this specification package. **Please note that the selected bidder must comply with federal Davis-Bacon wage rate requirements and meet the Minority- and Women-owned business (MBE/WBE) objectives outlined in the Cooperative Agreement. By accepting this contract, the contractor acknowledges and agrees to the terms provided in the Davis-Bacon and Related Acts (DBRA) Requirements for Contractors and Subcontractors under EPA Grants.** Davis-Bacon wage rates can be found in Appendix C.

The selected contractor shall comply with all applicable federal, state, and local laws and regulations. Funding for this project is provided through the UEPA Brownfields Cleanup Grant Program. The selected Contractor must take into account compliance with all regulations applicable to the EPA Brownfields Program and will also be subject to the Terms and Conditions of the Cooperative Agreement.

SAFETY AND HEALTH REGULATIONS

This project is subject to all the Safety and Health Regulations (CFR 29 Part 1926 and all subsequent amendments) as promulgated by the U.S. Department of Labor on June 24, 1974. Contractors shall comply with the requirements of these regulations. See Notice to Bidders above.

NONDISCRIMINATION IN EMPLOYMENT

Contracts for work under this proposal will obligate the contractors and sub-contractors not to discriminate in employment practices.

COPIES OF THE CONTRACT

There shall be multiple executed copies of the Contract to be distributed as follows:

- a) One (1) copy each to the Owner, Engineer and Contractor.

NON-RESIDENT CONTRACTORS

The successful bidder, if a corporation established under laws other than the State of New Hampshire, shall file, at the time of the execution of the contract, with the Owner, notice of the name of its resident attorney, appointed as required by the laws of the State of New Hampshire.

The successful bidder, if not a resident of New Hampshire, and not a corporation, shall file, at the time of execution of the contract, with the Owner a written appointment of a resident of the state of New Hampshire, having an office or place of business therein, to be their true and lawful attorney upon whom all lawful processes in any actions or proceedings against them may be served; and in such writing, which shall set forth said attorney's place of residence, shall agree that any lawful process against them which is served on said attorney shall be of the same legal force and validity as if served on them and that the authority shall continue in force so long as any liability remains outstanding against them in New Hampshire.

The power of attorney shall be filed in the office of the Secretary of State if required, and copies certified by the Secretary shall be sufficient evidence thereof. Such appointment shall continue in force until revoked by an instrument in writing, designating in a like manner some other person upon whom such processes may be served, which instrument shall be filed in the manner provided herein for the original appointment.

A Non-resident Contractor shall be deemed to be:

INFORMATION FOR BIDDERS

- a) A person who is not a resident of the State of New Hampshire.
- b) Any partnership that has no member thereof resident of the State of New Hampshire.
- c) Any corporation established under laws other than those of the State of New Hampshire.

BIDDERS' QUALIFICATIONS

No award will be made to any Bidder who cannot meet all of the following requirements:

- A. He shall not have defaulted nor turned the work over to the bonding company on any contract within three years prior to the bid date.
- B. He shall maintain a permanent place of business.
- C. He shall have adequate personnel and equipment to perform the work expeditiously.
- D. He shall have suitable financial status to meet obligations incidental to the work.
- E. He shall have appropriate technical experience satisfactory to the Engineer and the Division in the class of work involved.
- F. He shall be registered with the Secretary of State to do business in New Hampshire.
- G. He shall have performed to the satisfaction of the Engineer and the Division on previous contracts of a similar nature.
- H. He shall not have failed to complete previous contracts on time, including approved time extensions.

WITHDRAWAL OF BIDS

Prior to Bid Opening, bids may be withdrawn upon written or telegraphic request of the Bidder provided confirmation of any telegraphic withdrawal over the signature of the Bidder is placed in the mail and postmarked prior to the time set for Bid Opening. Bid documents and security of any Bidder withdrawing their bid in accordance with the foregoing conditions will be returned

BUILD AMERICA, BUY AMERICA ACT COMPLIANCE

The Contractor acknowledges to and for the benefit of the Town of Jaffrey ("Owner") and the EPA (the "Funding Authority") that it understands the goods and services under this Agreement are being funded with federal monies and have statutory requirements commonly known as "Build America, Buy America;" that requires all of the iron and steel, manufactured products, and construction materials used in the project to be produced in the United States ("Build America, Buy America Requirements") including iron and steel, manufactured products, and construction materials provided by the Contractor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Owner and Funding Authority (a) the Contractor has reviewed and understands the Build America, Buy America Requirements, (b) all of the iron and steel, manufactured products, and construction materials used in the project will be and/or have been produced in the United States in a manner that complies with the Build America, Buy America Requirements, unless a waiver of the requirements is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the Build America, Buy America Requirements, as may be requested by the Owner or the Funding Authority. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Owner or Funding Authority to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney's fees) incurred by the Owner or Funding Authority resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the Funding Authority or any damages owed to the Funding Authority by the Owner). If the Contractor has no direct contractual privity with the Funding Authority, as a lender or awardee to the Owner for the funding of its project, the Owner and the Contractor agree that the Funding Authority is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the Funding Authority.

END OF SECTION

INFORMATION FOR BIDDERS

BID FORM

Proposal of _____ (hereinafter called "BIDDER"), organized and existing under the laws of the State of New Hampshire doing business as _____ (Corporation, Partnership, Individual)

To the Town of Jaffrey, New Hampshire (hereinafter called "OWNER").

In compliance with your Advertisement for Bids, BIDDER hereby proposes to perform all WORK For the project Abatement and Demolition of Former W.W. Cross Property in strict accordance with the CONTRACT DOCUMENTS, within the time set forth therein, and at the prices stated below.

By submission of this BID, each BIDDER certifies, and in the case of a joint BID each party thereto certifies as to their own organization, that this BID has been arrived at independently, without consultation, communication, or agreement as to any matter relating to the BID with any other BIDDER or with any competitor.

BIDDER hereby agrees to commence WORK under this contract on or before a date to be specified in the NOTICE TO PROCEED and to complete the PROJECT within:
90 Calendar Days for substantial completion.
120 Calendar Days for final completion

Liquidated damages will be in the amount of \$1,500 for each calendar day of delay from the date established for substantial completion and \$1,500 for each calendar day of delay from the date established for final completion, as provided in Section 18 of the General Conditions.

BIDDER acknowledges receipt of the following ADDENDUM:

- 1 _____
- 2 _____
- 3 _____
- 4 _____
- 5 _____

The Bidder shall state below what works of a similar character to that of the proposed contract they have performed and provide such references as will enable the Owner to judge their experience, skill, and business standing.

In addition, all bidders shall submit information, for use and review by the Owner, consisting of the following: three (3) comparable projects with scope of work and construction value that equals or exceeds ninety percent (90%) of the prospective bidder's bid completed, or currently under contract, within the last five (5) years. Information about each project must include:

- a. name and location of project and type of construction and/or demolition;
- b. construction contract value (total initial contract and change orders);
- c. name of owner; and

- d. name of owner, engineer/architect, and construction/resident representative with addresses, telephone numbers and email addresses.

No award will be made to any bidder who cannot satisfy the Owner that it has sufficient ability and experience in this class of work and sufficient capital and plant to enable it to prosecute and complete the Work successfully within the time named. The Owner's decision or judgment on these matters will be final, conclusive, and binding.

All questions must be answered, and the data given must be clear and comprehensive. This statement must be notarized. If necessary, add separate sheets.

Bidder Name:			
Permanent Main			
Office Address:		Street # and name	City/Town State ZIP
When was it organized?		Where incorporated?	
<input type="checkbox"/> Yes	<input type="checkbox"/> No	Is the bidder registered with the Secretary of State to do business in NH?	
For how many years has your firm engaged in the contracting business under its present name? Please list previous firm names and dates if applicable.			
Years		Previous Name	
Contracts on hand, attach a schedule or list showing gross amount of each contract and the approximate anticipated dates of completion.			
Describe the general character of work performed by your company.			
<input type="checkbox"/> Yes	<input type="checkbox"/> No	Have you ever failed to complete any work awarded you in the scheduled contract time, including approved time extensions? If so where and why?	
<input type="checkbox"/> Yes	<input type="checkbox"/> No	Have you ever defaulted on a contract? If so where and why?	
<input type="checkbox"/> Yes	<input type="checkbox"/> No	Have you ever had liquidated damages assessed on a contract? If so where and why?	
List the more important contracts recently executed by your company:			
Recent Contract Name		Approximate Cost	Month/Year Completed
List your major equipment available for this contract: (Attach additional sheets as necessary.)			
List your key personnel available for this contract: (Attach additional sheets as necessary.)			
Staff Name		Role (i.e. Project Superintendent, Foreman)	

List any subcontractors whom you would expect to use for the following (unless this work is to be done by your own organization)

Civil Engineering

Utility Installation

Other please describe:

Please list banks with whom you conduct business.

Yes

No

Do you grant the Engineer permission to contact this (these) institutions?

NOTE: Bidders may be required to furnish their latest financial statement as part of the award process.

Respectfully Submitted:

Signature: _____ Date:

Printed Name: _____ Title:

Street # and name

City/Town

State

ZIP

[Signed Name] Being duly sworn, deposes and says that they are [Position Title] of [Organization] and all the answers to the foregoing questions and all statement contained therein are true and correct.

Sworn to before me this _____ day of _____, 20

_____, Notary Public

My Commission Expires

Seal

Attest:

BIDDER agrees to perform all the work described in the CONTRACT DOCUMENTS for the following unit prices or lump sum:

NOTE: BIDS shall include sales tax and all other applicable taxes and fees.

BID SCHEDULE

Item 1. BASE BID: Bidder agrees to perform all of the work described in the specification and shown on the plans for the sum of: _____

_____ Dollars and _____ Cents (\$_____)

(All entries shall be made clearly in ink or typewritten. Amounts are to be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)

The above prices shall include all labor, materials, bailing, shoring, removal, overhead, profit, insurance, engineering costs, etc., to cover the finished work of the several kinds called for.

The Bidder understands that all bids for this project are subject to the applicable bidding laws of the State of New Hampshire.

The contract will be awarded to the lowest responsible and eligible bidder based on the Base Bid.

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding.

END OF SECTION

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned as _____ Principal, and as _____ Surety, are hereby held and firmly bound unto The Town of Jaffrey, New Hampshire as OWNER in the penal sum of _____ for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed, this _____ day of _____ in the year _____.

The condition of the above obligation is such that whereas the Principal has submitted to The Town of Jaffrey, New Hampshire a certain BID, attached hereto and hereby made a part hereof to enter into a contract in writing, for the Abatement and Demolition of Former W.W. Cross Property.

NOW, THEREFORE,

- (a) If said BID shall be rejected, or
- (b) If said BID shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (Properly completed in accordance with said BID) and shall furnish a BOND for faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID, then this obligation shall be void, otherwise, the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Principal Signature

Witnessed By:

Surety Signature

Witnessed By:

IMPORTANT-Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state of New Hampshire.

END OF SECTION

BID BOND

**SUPPLEMENTAL INSTRUCTIONS TO BIDDERS
(EPA Funded Projects)**

1. Environmental Protection Agency Requirements

- A. The following "Instructions for Bidders" issued by the Environmental Protection Agency must be followed by the successful bidder on this contract. However, all bidders must include with their bid proposal a signed statement concerning previous work on Federally-assisted projects in accordance with the second paragraph of the "Non-discrimination in Employment" section of the referenced instructions.
- B. Refer to the referenced instructions for specific exclusions and details.

2. Nondiscrimination in Employment

- A. Contracts for work under this proposal will obligate the Contractors and subcontractors not to discriminate in employment practices.
- B. Bidders must submit with their initial bid a signed statement as to whether they have previously performed work subject to the President's Executive Order No. 11246, or any preceding similar Executive Order.
- C. Bidders must, if requested, submit a compliance report concerning their employment practices and policies in order to maintain their eligibility to receive the award of the contract.
- D. Successful bidders must, if requested, submit a list of all subcontractors who will perform work on the project and written signed statements from authorized agents of the labor pools with which they will or may deal for employees on the work together with supporting information to the effect that said labor pools' practices and policies are in conformity with Executive Order No. 11246 and that said labor pools will affirmatively cooperate in or offer no hindrance to the recruitment, employment, and equal treatment of employees seeking employment and performing work under the contract or, a certification as to what efforts have been made to secure such statements when such agents or labor pools have failed or refused to furnish same prior to the award of the contract.
- E. Successful bidders must be prepared to comply in all respects with the contract provisions regarding nondiscrimination which are contained on Pages 3 and 4 of the Labor Standards Provisions for Federally Assisted Construction Contracts dated May 1973, a copy of which is attached to these specifications.

3. Safety and Health Regulations

This project is subject to the Safety and Health Regulations of the U.S. Department of Labor set forth in Title 29 CFR, Part 1926 and to all subsequent amendments. Contractors shall be familiar with the requirements of these regulations.

4. Equipment Manufacturers Experience with Product

Whenever it is written that an equipment manufacturer must have a specified period of experience with his product, equipment which does not meet the specified experience period can be considered if the equipment supplier or manufacturer is willing to provide an "Efficiency Guarantee Bond" or cash

deposit for the duration of the specified time period which will guarantee replacement of that equipment in the event of failure.

5. Federal Wage Rates

Federal wage rates apply to this project. The Federal Wage Determination is attached to these specifications in Appendix C. It is the responsibility of the Contractor, before bid opening, to request, if necessary, any additional information on Federal Wage Rates for those tradespeople who are not covered by the applicable Federal Wage Decision, but who may be employed for the proposed work under this Contract.

6. Federal Requirements for Increased Utilization of Minority Business Enterprise

- A. It is the policy of EPA to encourage increased minority business enterprise (MBE) and women business enterprise (WBE) participation in contracts and subagreements awarded under EPA grants for construction of publicly-owned wastewater treatment works. .
- B. The MBE policy and Interim Guidance should be studied before the Bidder prepares his Bid. Failure to complete these requirements may result in a finding that the Bidder is nonresponsible and, therefore, not entitled to award of this Contract.

7. Fair Share Objectives

- A. The Town of Jaffrey has negotiated the following applicable MBE/WBE fair share objectives/goals with EPA as follows:
 - a. WBE - 8.31% and MBE - 2.25%
- B. MBE/WBE goals are applicable to the total dollars paid to the construction contract. The Bidder will comply with the minority workforce percentage ratios identified above. The contractor receiving the award of the contract shall be required to obtain from each of its subcontractors a copy of the certification by said subcontractor, regardless of tier, that it will comply with the minority workforce ratio.

8. Information Regarding Buy American Provision

- A. The Buy American Provision of Public Law 95-217 (Section 215 of Public Law 92-500 as amended) as implemented by EPA regulations and guidance, generally requires that preference be given to the use of domestic construction material in the performance of this contract.
- B. Bid or proposals offering use of nondomestic construction material may be acceptable for award if the Regional Administrator waives the Buy American provision based upon those factors that are deemed relevant, including: (i) such use is not in the public interest; (ii) the cost is unreasonable; (iii) the available resources of the Agency are not sufficient to implement the provision, or (iv) the articles, materials, or suppliers from which they are manufactured are not mined, produced, or manufactured, as the case may be, in the United States in sufficient and reasonably available commercial quantities and of a satisfactory quality for the particular project. The Regional Administrator may also waive the Buy American provision if it is determined that application for this provision is contrary to multilateral government procurement

agreements. Such evidence as the EPA Regional Administrator may deem relevant shall be furnished to justify use of nondomestic construction material.

9. EPA Project Sign

The Contractor shall display the EPA Project Sign (to be provided by the Town of Jaffrey). The sign shall be erected on the temporary fencing near the entrance gate. The Contractor shall maintain the sign throughout the duration of the contract.

10. Access to Site

Representatives of the U.S. Environmental Protection Agency and of the State shall have access to the work wherever it is in preparation or progress and the Contractor shall provide proper facilities for such access and inspection.

11. Federally Assisted Contracts

This Contract is Federally assisted. The Contractor must, therefore, comply with the Davis-Bacon Act, the Anti-Kickback Act, the Contract Work Hours Standards Act, Title VI of the Civil Rights Act of 1964, and Executive Orders 11246 and 11375 and any other applicable Federal statute.

END OF SECTION

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that

_____ (Name of Contractor)

_____ (Address of Contractor)

a _____, hereinafter called Principal,
(Corporation, Partnership or Individual)

and _____
(Name of Surety)

_____ (Address of Surety)

hereinafter called Surety, are held and firmly bound unto

Town of Jaffrey, New Hampshire
_____ (Name of Owner)

10 Goodnow Street, Jaffrey, NH 03452
_____ (Address of Owner)

hereinafter called **OWNER** and unto all persons, firms, and corporations who or which may furnish labor, or who furnish materials to perform as described under the contract and to their successors

and assigns, in the total aggregate penal sum of _____ Dollars,
(\$ _____) in lawful money of the United States, for the payment of which sum well and

truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the **OWNER**, dated the _____ day of _____

20 25 , a copy of which is hereto attached and made a part hereof for the project:

Abatement and Demolition of Former W.W. Cross Property

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, and corporations furnishing materials for or performing labor in the prosecution of the **WORK** provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such **WORK**, and for all labor cost incurred in such **WORK** including that be a subcontractor, and to any mechanic or materialman lienholder whether it acquires its lien by operation of State or Federal Law; then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, that beneficiaries or claimants hereunder shall be limited to the subcontractors, and persons, firms, and corporations having a direct contract with the PRINCIPAL or its SUBCONTRACTORS.

PROVIDED FURTHER, that the said Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the **WORK** to be performed thereunder or the **SPECIFICATIONS** accompanying the same shall in any way affect its obligation on this **BOND**, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the **WORK** or to the **SPECIFICATIONS**.

PROVIDED, FURTHER that no suit or action shall be commenced hereunder by any claimant: (a) Unless claimant, other than one having a direct contract with the PRINCIPAL shall have given written notice to any two of the following: The PRINCIPAL, the OWNER, or the SURETY above named within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the PRINCIPAL, OWNER, or SURETY, at any place where an office is regularly maintained for the transaction business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer. (b) After the expiration of one (1) year following the date on which PRINCIPAL ceased work on said CONTRACT, it being understood, however, that if any limitation embodied in the BOND is prohibited by any law controlling the construction hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

PROVIDED, FURTHER, that it is expressly agreed that this BOND shall be deemed amended automatically and immediately, without formal and separate amendments hereto, upon amendment to the Contract not increasing the contract price more than 20 percent, so as to bind the PRINCIPAL and the SURETY to the full and faithful performance of the Contract as so amended. The term "Amendment", wherever used in this BOND and whether referring to this BOND, the contract or the loan Documents shall include any alteration, addition, extension or modification of any character whatsoever.

PROVIDED FURTHER, that no final settlement between the **OWNER** and the **CONTRACTOR** shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in _____ counterparts, each one of
 (number)
 which shall be deemed an original, this _____ day of _____, 20 24 .

ATTEST:

By: _____
 (Principal) Secretary

(SEAL)

BY

 Principal

 (Address)

By: _____
 Witness as to Principal

 (Address)

 (Surety)

ATTEST:

BY

By _____
 Witness as to Surety

 Attorney - in - Fact

 (Address)

 (Address)

NOTE: Date of **BOND** must not be prior to date of Contract.
 If **CONTRACTOR** is partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing **BONDS** must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of New Hampshire.

END OF SECTION

P:\NH\Jaffrey\24-1157-Brownfields Cleanup QEP\05-Specifications\02-Ph1 Demo Design\DIV 00\B\B-3 - Payment Bond.docx

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

_____ (Name of Contractor)

_____ (Address of Contractor)

a _____, hereinafter called Principal,
 (Corporation, Partnership or Individual)

and _____ (Name of Surety)

_____ (Address of Surety)

hereinafter called Surety, are held and firmly bound unto

Town of Jaffrey, New Hampshire
 _____ (Name of Owner)

10 Goodnow Street, Jaffrey, NH 03452
 _____ (Address of Owner)

hereinafter called **OWNER**, in the total aggregate penal sum of _____ Dollars, \$ (_____)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a

certain contract with the **OWNER**, dated the _____ day of _____ 20 24 , a

copy of which is hereto attached and made a part hereof for the project:

Abatement and Demolition of Former W.W. Cross Property

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extension thereof which may be granted by the **OWNER**, with or without notice to the Surety and during the one year guaranty period, and if the **PRINCIPAL** shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the **OWNER** from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the **OWNER** all outlay and expense which the **OWNER** may incur in making good any default, then this obligation shall be void: otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to **WORK** to be performed thereunder or the specifications accompanying same shall in any way affect its obligation on this **BOND**, and it does hereby

waive notice of any such change, extension of time alteration or addition to the terms of the contract or to the **WORK** or to the specifications.

PROVIDED, FURTHER, that it is expressly agreed that this **BOND** shall be deemed amended automatically and immediately, without formal and separate amendments hereto, upon amendment to the Contract not increasing the contract price more than 20 percent, so as to bind the **PRINCIPAL** and the **SURETY** to the full and faithful performance of the Contract as so amended. The term "Amendment", wherever used in this **BOND** and whether referring to this **BOND**, the contract or the loan Documents shall include any alteration, addition, extension or modification of any character whatsoever.

PROVIDED, FURTHER, that no final settlement between the **OWNER** and the **CONTRACTOR** shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in _____ counterparts, each one of (number)

which shall be deemed an original, this _____ day of _____, 20 24 .

ATTEST:

By: _____
 (Principal) Secretary
(SEAL)

 Principal
BY _____

By: _____
 Witness as to Principal

 (Address)

 (Address)

ATTEST:
 By _____
 Witness as to Surety

 (Address)

 (Surety)
BY _____
 Attorney - in - Fact

 (Address)

NOTE: Date of **BOND** must not be prior to date of Contract.
 If **CONTRACTOR** is Partnership, all partners should execute BOND

IMPORTANT: Surety companies executing **BONDS** must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of New Hampshire

END OF SECTION

CHANGE ORDER

No. _____

PROJECT: _____ OWNER: _____ OWNER ADDRESS: _____	Abatement and Demolition of Former W.W. Cross Property Town of Jaffrey, NH 10 Goodnow St., Jaffrey, NH 03452	DATE OF ISSUANCE: _____ OWNER's Project No. _____ CONTRACTOR: _____ CONTRACT FOR: _____	ENGINEER: _____ ENGINEER ADDRESS: _____ ENGINEER's Project No. _____
		Abatement and Demolition of Former W.W. Cross Property	Weston & Sampson Engineers, Inc 100 International Dr., #152, Portsmouth, NH 03801 ENG24-1157

You are directed to make the following changes in the Contract Documents.

Description:

Purpose of Change Order:

Justification:

Attachments: (List documents supporting change)

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIME
Original Contract Price \$ _____	Original Contract Time _____ (days or date)
Previous Change Orders \$ _____	Net change from previous Change Orders _____ (days)
Contract Price prior to this Change Order \$ _____	Contract Time prior to this Change Order _____ (days or date)
Net Increase (Decrease) of this Change Order \$ _____	Net Increase (decrease) this Change Order _____ (days)
Contract Price with all approved Change Orders \$ _____	Contract Time with all Change Orders _____ (days or date)

This document will become a supplement to the CONTRACT and all provisions will apply hereto. The attached Contractor's Revised Project Schedule reflects increases or decreases in Contract Time as authorized by this Change Order.

Stipulated price and time adjustment includes all costs and time associated with the above described change. Contractor waives all rights for additional time extension for said change. Contractor and Owner agree that the price(s) and time adjustment(s) stated above are equitable and acceptable to both parties.

RECOMMENDED: By: _____ <div style="text-align: center;">Engineer</div> _____ <div style="text-align: center;">Date</div>	APPROVED: By: _____ <div style="text-align: center;">Owner</div> _____ <div style="text-align: center;">Date</div>	APPROVED: By: _____ <div style="text-align: center;">Contractor</div> _____ <div style="text-align: center;">Date</div>
--	--	---

CERTIFICATE OF SUBSTANTIAL COMPLETION

OWNER's Project No.: 2025-1 ENGINEER's Project No.: ENG24-1157

Project: Abatement and Demolition of Former W.W. Cross Property

CONTRACTOR: _____

Contract For: _____ Contract Date: _____

This Certificate of Substantial Completion applies to all Work under the Contract Documents or to the following specified parts thereof:

To: Town of Jaffrey, New Hampshire
(Owner)

And To: _____
(Contractor)

The Work to which this Certificate applies has been inspected by authorized representatives of OWNER, CONTRACTOR and ENGINEER, and that Work is hereby declared to be substantially complete in accordance with the Contract Documents on

(Date of Substantial Completion)

A tentative list of items to be completed or corrected is attached hereto. This list may not be all-inclusive, and the failure to include an item in it does not alter the responsibility of CONTRACTOR to complete all the Work in accordance with the Contract Documents. The items in the tentative list shall be completed or corrected by CONTRACTOR within _____ calendar days of the above date of Substantial Completion.

The responsibilities between OWNER and CONTRACTOR for security, operation, safety, maintenance, heat, utilities, insurance, and warranties shall be as follows:

RESPONSIBILITIES:

OWNER: _____

CONTRACTOR: _____

The following documents are attached to and made a part of this Certificate:

This certificate does not constitute an acceptance of Work not in accordance with the Contract Documents nor is it a release of CONTRACTOR's obligation to complete the Work in accordance with the Contract Documents.

Executed by ENGINEER on _____, 20 _____

Weston & Sampson Engineers, Inc.
(Engineer)

By: _____

CONTRACTOR accepts this Certificate of Substantial Completion on _____, 20 _____

(Contractor)

By: _____

OWNER accepts this Certificate of Substantial Completion on _____, 20 _____

Town of Jaffrey, New Hampshire
(Owner)

By: _____

SECTION 01 11 00
CONTROL OF WORK AND MATERIALS

PART 1 – GENERAL

Not Used.

PART 2 – PRODUCTS

Not Used

PART 3 - EXECUTION

3.01 HAULING, HANDLING AND STORAGE OF MATERIALS:

- A. The Contractor shall, at its own expense, handle and haul all materials furnished by it and shall remove any of its surplus materials at the completion of the work.
- B. The Contractor shall provide suitable and adequate storage for equipment and materials furnished by it that are liable to injury and shall be responsible for any loss of or damage to any equipment or materials by theft, breakage, or otherwise.
- C. All excavated materials and equipment to be incorporated in the Work shall be placed so as not to injure any part of the Work or existing facilities and so that free access can be always had to all parts of the Work and to all public utility installations in the vicinity of the work. Materials and equipment shall be kept neatly piled and compactly stored in such location as will cause a minimum of inconvenience to public travel and adjoining owners, tenants, and occupants.
- D. The Contractor shall be responsible for all damages to the work under construction during its progress and until final completion and acceptance even though partial payments have been made under the Contract.
- E. The Contractor shall confine construction equipment, the storage of materials and equipment and the operations of workers to the site and land and areas identified in and permitted by the Contract Documents associated with the phase of work being done, as necessary or required. The materials and equipment shall be placed as not to injure any part of the Work so that free access can be had at all times to all areas of the Work. The Contractor shall assume full responsibility for any damage to any such land or area, or to the Owner or occupant thereof or of any adjacent land or areas, resulting from the performance of the Work. Should any claim be made by any such Owner or occupant because of the performance of the Work, the Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
- F. All demolition debris and equipment to be incorporated in the Work shall be placed so as not to injure any part of the Work or existing facilities and so that free access can be had at all times to all areas of the Work. Materials and equipment shall be kept neatly piled and compactly stored in such locations as will cause a minimum of inconvenience to adjoining owners, tenants and occupants.
- G. The Owner shall approve staging and lay down areas.

3.02 OPEN EXCAVATIONS:

- A. All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights, and other means to prevent accidents to persons, and damage to property. The Contractor shall, at its own expense, provide suitable and safe means for completely covering all open excavations and for accommodating travel when work is not in progress.
- B. The length of open trench will be controlled by the surrounding conditions but shall always be confined to the limits prescribed by the Engineer.
- C. If the excavation becomes a hazard, or if it excessively restricts traffic at any point, then special construction procedures shall be taken, such as limiting the length of trench and prohibiting stockpiling of excavated material in the street.
- E. All street excavations shall be completely closed at the end of each work day. Backfilling or use of steel plates of adequate strength to carry traffic shall be used.

3.03 MAINTENANCE OF TRAFFIC:

- A. The Contractor shall submit a Traffic Management Plan for review and approval by the Engineer. The Traffic Management Plan shall be approved prior to any importation or shipment of materials to/from the Site. Trucks shall prioritize use of state/federal roads and highways over local roads as much as possible.
- B. Unless permission to close the street is received in writing from the proper authority, all materials and equipment shall be placed so that vehicular and pedestrian traffic may be safely always maintained.
- C. Should the Chief of Police deem it necessary, uniformed officers will be assigned to direct traffic. The Contractor shall make all arrangements in obtaining uniformed officers required.
- D. The Contractor shall at its own expense, as directed by the Police Traffic Control/Safety Officer, provide and erect acceptable barricades, barrier fences, traffic signs, and all other traffic devices not specifically covered in a bid item, to protect the work from traffic, pedestrians, and animals. The Contractor shall provide sufficient temporary lighting such as lanterns/flashers (electric battery operated) or other approved illuminated traffic signs and devices to afford adequate protection to the traveling public, at no additional cost to the Owner.
- E. The Contractor shall furnish all construction signs that are deemed necessary by and in accordance with Part VI of the Manual on Uniform Traffic Control Devices as published by the U.S. Department of Transportation. In addition, the Contractor may be required to furnish up to 128 square feet of additional special construction warning signs. Size and exact wording of signs shall be determined by the Engineer during construction.
- F. The intent of policing is to ensure public safety by direction of traffic. Police officers are not to serve as guards to protect the Contractor's equipment and materials.
- G. Nothing contained herein shall be construed as relieving the Contractor of any of its responsibilities for protection of persons and property under the terms of the Contract.

3.04 CARE AND PROTECTION OF PROPERTY:

- A. The Contractor shall be responsible for the preservation of all public and private property and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of the Contractor, such property shall be promptly restored by the Contractor, at its expense, to a condition similar or equal to that existing before the damage was done, to the satisfaction of the Engineer.
- B. The Contractor shall not enter upon nor occupy with personnel, equipment, or materials any property outside of the designated Limit of Work.
- C. If any direct or indirect damage is done to public or private property outside of the Limits of Work by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of the Contractor, such property shall be promptly restored by the Contractor, at his/her expense, to a condition similar or equal to that existing before the damage was done, to the satisfaction of the Engineer. Suitable materials and methods shall be used for such restoration. Restoration of existing property and structures shall be carried out as promptly as practicable and shall not be left until the end of the construction period.
- D. For work performed outside the Limit of Work shown on the Contract Drawings, such as public street openings or catch basin protection, existing paved and unpaved surfaces adjacent to the Limit of Work shall be properly maintained and kept constantly in repair by the Contractor. The Contractor shall not use or operate tractors, bulldozers, or other power-operated equipment with treads or wheels, which are shaped so as to cut or otherwise damage such surfaces; any damage caused during the construction operations shall be immediately repaired at the Contractor's expense.
- E. All land resources within the project boundaries and outside the limits of permanent work performed under this Contract shall be preserved in their present condition or be restored to a condition by completion of construction at least equal to that which existed prior to work under this Contract.

3.05 PROTECTION AND RELOCATION OF EXISTING STRUCTURES AND UTILITIES:

- A. All existing buildings, utilities, pipes, poles, wires fences, curbing, property line markers and other structures which the Engineer decides must be preserved in place without being temporarily or permanently relocated, shall be carefully supported, and protected from damage by the Contractor. Should such property be damaged, the Contractor shall restore it, at no additional cost to the Owner.
- B. The Contractor shall determine the location of all underground structures and utilities (including existing water services, drain lines, electrical lines, and sewers). The location of existing underground services and utilities shown on the Contract Drawings are based on available records. Although these documents may indicate the approximate location of existing utilities in the vicinity of the work, it is not warranted that all existing utilities and services are shown, or that indicated locations are correct. The Contractor shall coordinate all work involving utilities and shall verify the existing conditions of the areas in which the work is to be performed
- C. On paved surfaces the Contractor shall not use or operate tractors, bulldozers, or other power-operated equipment with treads or wheels which are shaped to cut or otherwise damage such surfaces.

- D. All property damaged by the Contractor's operations shall be restored to a condition at least equal to that in which it was found immediately before work was begun. Suitable materials and methods shall be used for such restoration.
- E. Restoration of existing property and structures shall be carried out as promptly as practicable and shall not be left until the end of the construction period.
- F. The Contractor shall assume full responsibility for the protection of all structures and utilities that are not scheduled for demolition and/or removal. These structures and utilities include, but are not limited to, hydrants, drain manholes, drains, drainage outfalls, sewers and catch basins, whether or not they are shown on the Contract Drawings. The Contractor shall carefully support and protect all such structures and utilities from injury of any kind. The Contractor shall provide bridging over utility piping to remain as necessary to protect pipes from damage. The Contractor shall repair any damage resulting from its operations at its expense.
- G. Any damaged utilities shall be repaired or replaced by the Contractor at no additional cost to the Owner.
- H. Fire hydrants scheduled to remain shall at all times be left clear of obstructions and readily accessible to fire apparatus, and no material or other obstructions shall be placed within ten (10) feet of a fire hydrant. Fire alarm boxes shall be maintained so as to be readily accessible and open to view. The Contractor shall maintain service and emergency access to all fire hydrants scheduled to remain within the Contract Limit of Work, as shown on the Contract Drawings. The Contractor shall coordinate the demolition work with the Jaffrey Fire Department as necessary.

3.06 MAINTENANCE OF FLOW:

- A. The Contractor shall at its own cost, provide for the flow of sewers and drains interrupted during the progress of the work, and shall immediately cart away and dispose of all offensive matter. The entire procedure of maintaining existing flow shall be fully discussed with the Engineer well in advance of the interruption of any flow.
- B. All existing drainage facilities including, but not limited to; brooks, streams, canals, channels, ditches, culverts, catch basins and drainage piping shall be adequately safeguarded so as not to impede drainage or to cause siltation of downstream areas in any manner whatsoever. If the Contractor damages or impairs any of the previously mentioned drainage facilities, it shall repair the same within the same day.
- C. At the conclusion of the work, the Contractor shall remove all silt in drainage structures caused by its operations as described in Section 01 74 13, CLEANING UP.
- D. The Contractor shall maintain flow and keep in operation the fire hydrants for fire suppression and dust control purposes.

3.07 REJECTED MATERIALS AND DEFECTIVE WORK:

- A. Materials furnished by the Contractor and condemned by the Engineer as unsuitable or not in conformity with the specifications shall forthwith be removed from the work by the Contractor and shall not be made use of elsewhere in the work.
- B. Any errors, defects or omissions in the execution of the work or in the materials furnished by the Contractor, even though they may have been passed or overlooked or have appeared after the completion of the work, discovered at any time before the final payment is made hereunder, shall be forthwith rectified and made good by and at the expense of the Contractor and in a manner satisfactory to the Engineer.

- C. The Contractor shall reimburse the Owner for any expense, losses or damages incurred in consequence of any defect, error, omission or act of the Contractor or its employees, as determined by the Engineer, occurring before the final payment.

3.08 SANITARY REGULATIONS:

- A. Sanitary conveniences for the use of all persons employed on the work, properly screened from public observation, shall be provided in sufficient numbers in such manner and at such locations as may be approved. The contents shall be removed and disposed of in a satisfactory manner as the occasion requires. The Contractor shall rigorously prohibit the committing of nuisances within, on or about the work. Any employees found violating these provisions shall be discharged and not again employed on the work without the written consent of the Engineer. The sanitary conveniences specified above shall be the obligation and responsibility of the Contractor.
- B. Use heavy-duty refuse containers with tight-fitting domed lids, with a spring-loaded flap, for disposal of all garbage and trash associated with food. Maintain these containers so there are no openings that allow access by rodents. Refuse containers shall be emptied daily to maintain site sanitation.
- C. Do not dispose of food, garbage, or trash associated with food in dumpsters or other containers being utilized for disposal of demolition debris.
- D. Maintain the site and its perimeter area free of trash, garbage, debris, and unnecessary or deteriorated hay bales. Provide and enforce proper use of refuse containers to ensure that rodents and other pests are not harbored or attracted.

3.09 SAFETY AND HEALTH REGULATIONS:

- A. This project is subject to the Safety and Health regulations of the U.S. Department of Labor set forth in 29 CFR, Part 1926. Contractors shall be familiar with the requirements of these regulations.
- B. The Contractor shall submit to the Owner, the Safety Data Sheets for all substances or mixture of substances used on the Project by the Contractor or its subcontractors prior to commencing any work.
- C. The Contractor shall take all necessary precautions and provide all necessary safeguards to prevent personal injury and property damage. The Contractor shall provide protection for all persons including, but not limited to, his/her employees and employees of other contractors or subcontractors; members of the public; and employees, agents, and representatives of the Owner, and regulatory agencies that may be on or about the Work.
- D. The Contractor shall comply with all applicable Federal, State and local laws, ordinances, rules and regulations and lawful orders of all authorities having jurisdiction for the safety of persons and protection of property.
- E. The Contractor shall designate a responsible member of its organization at the site whose duty shall be responsible for all matters of safety. This responsible person shall have the authority to take immediate action to correct unsafe or hazardous conditions and to enforce safety precautions and programs.

3.10 SITE INVESTIGATION:

The Contractor acknowledges that it has satisfied itself as to the conditions existing at the site of the work, the type of equipment required to perform this work, the quality and quantity of the materials furnished as far as this information is reasonably ascertainable from an inspection of the site, as well as from information presented by the drawings and specifications made a part of this contract. Any failure of the Contractor to acquaint itself with available information will not relieve it from the responsibility for estimating properly the difficulty or cost of successfully performing the work. The Owner assumes no responsibility for any conclusion or interpretation made by the Contractor based on the information made available by the Owner.

3.11 ELECTRIC SERVICE:

- A. The Contractor shall make all necessary applications and arrangements and pay for all fees and charges for electrical energy for power and light necessary for the proper completion of this contract during its entire progress. The Contractor shall provide and pay for all temporary wiring, switches, connections, and meters.
- B. There shall be sufficient electric lighting so that all work may be done in a skillful manner where there is not sufficient daylight.

3.12 NOTIFICATIONS

- A. The Contractor shall make the appropriate notifications to the New Hampshire DES and the EPA including, but not limited to, the DES notification prior to demolition and abatement, and EPA notification required under the Federal National Emission Standards for Hazardous Air Pollutants.

3.13 PERFORM WORK IN ACCORDANCE WITH REQUIREMENTS:

- A. The Contractor shall perform the work in accordance with the Contract Documents, including the attached permits/order of conditions, and any applicable municipal requirements.
- B. Prior to commencing any construction activities, the Contractor shall demonstrate to the Owner and the Engineer, through on-site inspection and submitting copies of permits or approvals, that it is in full compliance with the terms and conditions of all permits specified herein. The Contractor shall maintain full compliance with all permits throughout the performance of the work, and upon request, grant access to permitting authorities to inspect the site for the purpose of verifying such compliance.

END OF SECTION

SECTION 01 12 16
SCOPE AND SEQUENCE OF WORK

PART 1 – GENERAL

1.01 WORK INCLUDED:

The work under this contract includes the abovegrade abatement, demolition, and disposal of the remaining 74,000 square feet of an existing approximately 116,000 square-foot single story mixed use building constructed of steel and wood framing and miscellaneous appurtenances, including but not limited to an aboveground storage tank (AST) and its enclosure building and three transformers. The 116,000 square foot building has had a portion previously removed; this contract includes demolition of the remaining approximately 74,000 square foot building, handling and disposal of numerous hazardous building materials within the building, removal of historic AST and its enclosure building, handling and disposal of asbestos-containing materials, and handling and disposal of lead coated surfaces. The Site is located at 39 Webster St in Jaffrey, New Hampshire. See Drawing C-101 Existing Conditions Plan for additional details.

1.02 EXISTING CONDITIONS:

The Contractor shall note the project involves the handling of hazardous materials impacted with asbestos and lead. Asbestos containing materials (ACM) include but are not limited to caulking found in windows throughout the building, roofing materials, and tiling found in the original structure. Lead-based paint (LBP) was identified on numerous painted surfaces throughout the building. See Specification Section 02 82 33 – ASBESTOS ABATEMENT, the attached *Hazardous Building Materials Inventory*, and Section 02 80 00.13 – REMOVAL OF UNIVERSAL AND HAZARDOUS WASTE FROM BUILDINGS.

1.03 HEALTH AND SAFETY

There are contaminated soils and groundwater at the suite. No soils or groundwater shall be removed from the site; however, the Contractor will be required to handle soils during certain site activities (e.g. utility abandonment, test pitting, etc.) The Site is a regulated Site by the New Hampshire Department of Environmental Services (NHDES). Site files can be seen at NHDES online database ONESTOP, Site #198708007. The Contractor is responsible for the health and safety of its employees.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.01 GENERAL:

- A. The Contractor shall be responsible for scheduling its activities and the activities of any subcontractors involved, to meet the completion date, or milestones, established for the contract. Scheduling of the work shall be coordinated with the Owner and Engineer.
- B. The Construction Sequence Requirements shall be used by the Contractor to form a complete schedule for the project, which shall be coordinated with the Owner and Engineer. Prior to performing any work at the site, the Contractor shall submit a detailed plan to the Engineer for review. The plan shall describe the proposed sequence, methods, and timing of the work.

- C. The schedule shall consist of a Gantt Chart showing the sequence of work described herein including permitting, submittal preparation, Site mobilization, Site work (site preparation, demolition, site restoration, etc.), project closeout, demobilization, and chart contract completion.

3.02 CONSTRUCTION SEQUENCING REQUIREMENTS:

- A. The demolition work shall be completed in one (1) contiguous phase. The work of this project shall begin upon receipt of the "Notice to Proceed" from the Owner. A Pre-Construction Meeting shall be scheduled by the Owner and must be attended by the Contractor and any Sub-Contractors.
- B. The Contractor shall read and understand the technical specifications and Contract Drawings, including the following critical specifications:
 - a. Section 01 22 00 – MEASUREMENT & PAYMENT
 - b. Section 02 41 16 – DEMOLITION
 - c. Section 02 41 13.36 – UTILITY ABANDONMENT
 - d. Section 02 82 33 – ASBESTOS ABATEMENT

- C. The following outlines the sequence of work to be performed at the site:

- a. Install chain link fencing with wind screens, erosion and sedimentation controls.
- b. Verify locations of site utilities with private utility locator/utility companies/Jaffrey Utility Department and disconnect all utilities to the building in accordance with the utility authority requirements prior to demolition or excavation work. Verify locations of catch basins and underground drainage lines to remain and be protected.
 - i. Utilize sewer camera locating services to identify building sewer connections to the main
- c. Obtain demolition permits and develop and submit required project-specific plans/submittals, including, but not necessarily limited to, demolition plan, health and safety plan, dust control plan, etc.
- d. All asbestos, lead, and other hazardous materials (OHMs) shall be removed prior to building demolition.
- e. Demolish and remove the Aboveground Storage Tank as specified in the Contract Documents.
- f. Demolish and remove the transformers as specified in the Contract Documents.
- g. Demolish and remove above-grade features of the primary building and AST enclosure building, including ancillary features and structures as specified in the Contract Documents. The slab of both buildings are to remain.
- h. Removal of erosion and sedimentation controls. Temporary fencing shall remain for subsequent remediation phase and removed by others.

END OF SECTION

**SECTION 01 14 00
SPECIAL PROVISIONS**

PART 1 - GENERAL

Not used

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

3.01 WATER FOR CONSTRUCTION PURPOSES:

- A. In locations where water is in sufficient supply, the Contractor may be allowed to use water without charge for demolition and other construction purposes. The Contractor shall install temporary metered water lines with backflow preventers, as required, to provide water for dust control activities, and shall provide protection for the hydrant. The express approval of the Owner shall be obtained before water is used. Use of the nearby hydrant shall be coordinated with the Jaffrey Utility Department. Waste of water by the Contractor shall be sufficient cause for withdrawing the privilege of unrestricted use.
- B. If no water is available, the Contractor shall supply water at no additional cost to the Owner.

3.02 DIMENSIONS OF EXISTING STRUCTURES:

Where the dimensions and locations of existing structures are of critical importance in the installation or connections of new work, the Contractor shall verify such dimensions and locations in the field before the fabrication of any material or equipment that is dependent on the correctness of such information.

3.03 OCCUPYING PRIVATE PROPERTY:

The Contractor shall not enter upon nor occupy with men, equipment or materials any property outside of the public highways or Owner's easements, except with the written consent of the property owner or property owner's agent.

3.04 EXISTING UTILITY LOCATIONS – CONTRACTOR'S RESPONSIBILITY:

- A. The location of existing underground services and utilities shown on the drawings is based on available records. It is not warranted that all existing utilities and services are shown, or that shown locations are correct. The Contractor shall be responsible for having the utility companies locate their respective utilities on the ground prior to excavating.
- B. To satisfy the requirements of New Hampshire law, Chapter 374, Section 51, the Contractor shall, at least 72 hours, exclusive of Saturdays, Sundays and holidays, prior to excavation in the proximity of telephone, gas, cable television and electric utilities, notify the utilities concerned by calling "DIG SAFE" at telephone number: 1-888-344-7233.
- C. The Contractor shall coordinate all work involving utilities and shall satisfy itself as to the existing conditions of the areas in which it is to perform its work. It shall conduct and arrange its work so as not to impede or interfere with the work of other contractors working in the same or adjacent areas.

- D. Up to 200 cubic yards of test pits for the purpose of locating underground pipelines or structures in advance of demolition work shall be excavated and backfilled by the Contractor as required by the Engineer. Test pits shall be backfilled immediately after their purpose has been satisfied and the surface restored and maintained in a manner satisfactory to the Engineer. Soil shall be backfilled in the same general depth it was excavated from. See Section 01 35 29 – HEALTH AND SAFETY PLAN for additional requirements when excavating soil within the Limit of Work. The Contractor shall test pit as part of this Project for the purpose of locating underground pipelines and structures at no additional cost to the Owner

3.05 COORDINATION OF WORK:

The General Contractor shall be responsible for coordinating its own work as well as that of any subcontractors. It shall be responsible for notification of the Engineer when each phase of work is expected to begin and the approximate completion date.

3.06 TIME FOR COMPLETION OF CONTRACT:

The time for completion of this contract is stipulated in Section A-1 – Advertisement for Bids. The Bidder shall base its bid on completing the proposed work by the completion date stipulated in this Section.

3.07 MAINTENANCE OF TRENCH SURFACE:

After backfilling and compacting the trench, the Contractor shall be responsible for keeping the ground surface dry and passable at all times until the surface has been restored to original conditions.

3.08 COMPLIANCE WITH PERMITS:

- A. The Contractor shall perform all work in conformance with requirements of the Permits, which appear in Section 01 31 43 – PERMITS.

3.09 CONTRACTOR'S REPRESENTATIVE:

The Contractor shall designate a representative who will be available to respond to emergency calls by the Owner at any time day and night and on weekends and holidays should such a situation arise.

3.10 HOURS OF CONSTRUCTION ACTIVITY:

- A. The Contractor shall conduct all construction activity between 7:00 a.m. and 5:00 p.m., Monday through Friday. No construction work shall be allowed on Saturdays, Sundays or Holidays without written authorization from the Owner.

3.11 PROJECT SIGNAGE:

- A. The Contractor shall install and maintain construction signs for the duration of the Project. Signs to be installed every 100 linear feet and maintained by the Contractor include, but not limited to: Twenty (20) of each of the following project signs, 1-foot by 2-foot (minimum), "Construction Area" signs, "Site under 24-hour video surveillance" signs, and "No Trespassing/Keep Out" signs. Locations, wording, and size of signs shall be coordinated with Owner after the Contract is awarded. All signs shall be printed in English and Spanish. The Contractor shall fabricate and install signs as specified in Section 01 11 00 – CONTROL AND WORK OF MATERIALS,

including up to 128 square feet of additional traffic and/or project signs. Prior to sign fabrication, the Contractor shall submit a draft template of the sign to the Engineer for approval of the layout and wording. See Section 01 55 26.13 – SIGNAGE (TRAFFIC CONTROL) for additional sign requirements.

- B. The Contractor shall provide, and install where directed by the Engineer, one 4-foot by 8-foot project sign. The sign shall be vinyl material with reinforced edges and grommets every 24-inches. Project sign shall be secured to the temporary fence adjacent to the entrance gate. Coordinate with the Town and Engineer for lettering and logos (names of Town, Engineer, and funding sources required). Owner shall provide a template for the Project sign to the Contractor, including a QR code.
- C. The project signs shall be erected prior to commencement of Site work. The project signs shall be fabricated, erected, and maintained by the Contractor.
- D. Contractor shall coordinate with Town to display the EPA Project Sign, to be provided by the Town of Jaffrey. The sign shall be erected in a location selected by the Engineer. The Contractor shall maintain the sign throughout the duration of the contract.
- E. The Contractor shall provide adequate support for the signs as determined by the Engineer.
- F. The project signs shall be maintained by the Contractor in good condition at all times for the duration of construction. The Contractor shall remove the signs upon completion of construction.

END OF SECTION

SECTION 01 14 19.16
DUST CONTROL

PART 1 - GENERAL

1.01 DESCRIPTION:

- A. This Section specifies requirements for controlling dust generated during work of this Contract. Work activities requiring special attention to dust control include building demolition. Dust generated during the course of the Work must be controlled and kept on-site.
- B. The Contractor is responsible for control of dust at all times during work of this Contract, 24 hours per day, 7 days per week, including non-working hours, weekends, and holidays.
- C. During the progress of the work, the Contractor shall conduct its operations and maintain the area of his activities, including sweeping and sprinkling of streets as necessary, to minimize creation and dispersion of dust. A robust dust control system shall be established prior to demolition activities. Dust shall be controlled through the use of elevated static lines (i.e., fire hoses with misting nozzles) and/or mechanized dust suppression machines (i.e., misters). If dust exceeds action levels described in this Section, or determined to be a nuisance by the Engineer (e.g. visible dust clouds), the Contractor shall be responsible for implementing additional engineering controls (e.g. additional dust suppression agents, wind screens), as required by the Engineer, and described in this Section at no additional cost to the Owner. The Contractor shall be responsible for perimeter dust monitoring, and the Engineer may perform additional dust monitoring for confirmatory purposes.
- D. Contractor shall be responsible for securing a temporary hydrant use permit to provide water service for dust control purposes and furnishing and installing a flow meter, backflow preventer, and any other hydrant connection devices as required by the Town of Jaffrey to comply with permit conditions. The Contractor shall be responsible for furnishing all labor, materials, equipment, and incidentals required for dust control during the demolition activities to be performed.
- E. The Contractor is responsible for daily clean-up of public roadways, adjacent driveways/parking lots, and walkways affected by work of this Contract. A wet spray power vacuum street sweeper shall be used on pavement, as required. Dry power sweeping is prohibited.

1.02 RELATED WORK:

- A. Section 01 14 00 – SPECIAL PROVISIONS
- B. Section 01 35 19 – HEALTH AND SAFETY PLAN
- C. Section 01 57 19 – ENVIRONMENTAL PROTECTION
- D. Section 02 41 16 –DEMOLITION
- E. Section 02 82 33 – ASBESTOS ABATEMENT

1.03 REGULATORY REQUIREMENTS:

- A. Work of this Contract shall be conducted in a manner that will not result in excessive particulate matter emissions, nuisance dust conditions, PM10 (particulate matter with an aerodynamic diameter less than or equal to 10 microns) emissions, or PM10 concentrations exceeding 120 µg/m³ on 24-hour average basis. However, 15-minute spikes of 150 µg/m³ will require additional dust control via water hoses and/or misting.

1.04 SUBMITTALS:

- A. Contractor shall submit a Dust Control Plan that outlines in detail the measures that it will implement to comply with this Section, including suppression, wind screens and barriers (if necessary), prevention, cleanup, and other measures. Plan shall be submitted to the Engineer within fifteen calendar days following the date of the Notice to Proceed.
- B. Contractor shall submit to the Engineer product literature and Safety Data Sheets for any dust suppression wetting agents and stabilizers that the Contractor proposes to use.
- C. The Contractor shall submit the data collected from the air monitor (Mini Ram monitor or approved equivalent) electronically to the Engineer on a daily basis, including data from all air monitors, daily averages and daily high readings during work activities. The Contractor shall note daily site conditions contributing to elevated readings (e.g., high winds, etc.).
- D. Any exceedance of dust control limits will require the Contractor to notify the Owner and Engineer stop work. The Contractor shall apply additional dust controls until the exceedances are addressed and documented reduction of dust levels below the action levels. No additional compensation will be made for delays due to stoppages to addressed elevated dust levels.

1.05 DUST MONITORING:

- A. The Contractor shall monitor for dust in ambient air using a minimum of two (2) Mini Ram monitors, with continuous data loggers, or equivalent. One dust monitor shall be located downwind of the work area at a location approved by the Engineer, and the second dust monitor shall be located on the southwestern perimeter, nearest to 35 Oak Street. If the Dust Action Level is exceeded due to the creation and dispersion of dust by Contractor's activities (as determined by the Engineer) additional dust suppression controls shall be implemented as specified herein, at no additional cost to the Owner. If the Dust Action Level is exceeded after the implementation of additional dust suppression controls, additional dust monitors at the perimeter of the Limits of Work, shall be implemented by the Contractor to monitor dust at no additional cost to the Owner. Dust monitoring shall be performed at the perimeter of the Limits of Work at a minimum of upwind, downwind and two crosswind perimeter locations.
- B. The Engineer may conduct air monitoring with a Mini RAM monitor, or equivalent, to ensure dust is being controlled at the site. During the course of the work, the Contractor shall be responsible for implementing engineering controls (e.g., wetting) to minimize or eliminate fugitive dust emissions. If dust exceeds action levels described below, or determined to be a nuisance by the Engineer at the site during the course of this Project, the Contractor shall be responsible for implementing additional engineering controls (e.g., additional dust suppression agents, wind screens), as required by the Engineer. If additional wet suppression (water) and/or wind screens, barriers, or covers are required per the Engineer based on air/dust monitoring results, they shall be at no additional cost to the Owner.
- C. During the progress of the work, the Contractor shall conduct its operations and maintain the area of his activities, including sweeping and sprinkling of streets as necessary, to minimize creation and dispersion of dust.

PART 2 - PRODUCTS

2.01 DUST SUPPRESSION AGENTS:

- A. Dust suppression wetting agents shall be water soluble, non-toxic, non-reactive, non-volatile, and non foaming.

1. Tackifiers
 - A. Tackifiers, such as calcium chloride, shall not be used as dust suppression agents.

2. Water
 - A. Water shall not be brackish and shall be free from oil, acid, and injurious alkali or vegetable matter.

2.02 BARRIERS, SCREENS, AND COVERS:

- A. Mesh fabric wind screen for dust control and to shield remediation activities from adjacent properties shall be durable fabric of 50 percent porosity that is weather resistant. Fabric shall be securely fastened to temporary fence, section of existing fence where indicated on the Contract drawings, and gates to provide a continuous dust screen that completely cover the fence and gates at the site perimeter. Fabric shall be dark green in color, unless otherwise approved by the Owner.
- B. The mesh fabric wind screen composition shall be knitted high density polyethylene (HDPE) with a material break strength of 420 lbs/ft. Mesh fabric panels shall be lined with 2-inches of polypropylene webbing for edge reinforcement and 3/8-inch brass grommets at 24-inch on center intervals to attach to the fence with manufacturer approved fasteners or galvanized hog rings.
- C. Covers for debris stockpiles shall be plastic tarps. Covers shall be 8-mil. fire retardant clear polyethylene sheeting or 6-mil fire retardant black plastic sheeting. The stockpile shall be placed on 8-mil. fire retardant clear polyethylene sheeting or 6-mil fire retardant black plastic sheeting.

PART 3 - EXECUTION

3.01 CONSTRUCTION SITE DUST CONTROL – GENERAL:

- A. Wet suppression shall be used to provide temporary control of dust. Several applications per day may be necessary to control dust depending upon meteorological conditions and work activity. The Contractor shall apply wet suppression on a routine basis as necessary or required by the Engineer, to control dust. At a minimum, wet suppression shall be applied to demolition debris, aggregate piles, exposed soils and dirt, and structures that are in the process of being demolished.
 1. Wet suppression consists of the application of water or a wetting agent in solution with water. Ensure wetting agent is not used on plantable soils.
 2. Wet suppression equipment shall consist of sprinkler pipelines, tanks, tank trucks, or other devices capable of providing regulated flow, uniform spray, and positive shut-off.
 3. Water may be sprinkler applied with equipment including a tank with gauge-equipped pressure pump and a nozzle-equipped spray bar.
 4. Water shall be dispersed through the nozzle under a minimum pressure of 20 pounds per square inch, gauge pressure.
 5. The Contractor shall provide the necessary means to retain on-site all water runoff generated by dust control and dispose of such water in accordance with the requirements of the appropriate regulatory agencies. Dust suppression measures should not result in ponding of water. If water collects or ponds due to dust control or storm events, the Contractor shall pump the water to an on-site fractionation tank and discharge the water to the ground during dry conditions or reuse the water for dust control. Filtered water shall

be pumped to an on-site fractionation tank to be re-used for dust control or discharged to the ground during dry conditions. Coordinate with the requirements of Section 01 57 19 - ENVIRONMENTAL PROTECTION.

- B. The use of petroleum products for dust suppression is prohibited in this Contract.
- C. Provide wind screens and wind barriers in locations where they would be effective in minimizing wind erosion and spread of dust. Locations shall be submitted as part of the Contractor's Dust Control Plan. The Contractor shall keep wind screens and barriers in good repair for the life of the Contract.

3.02 PUBLIC ROADWAY DUST CONTROL:

- A. Vehicles leaving the demolition site shall have no mud and dirt on the vehicle body or wheels. Any foreign matter on the vehicle body or wheels shall be physically removed prior to vehicle's entering of a public roadway. Contractor shall not permit any truck to leave the site with exterior mud or dirt that has the potential to be deposited on public roadways. Contractor shall construct anti-tracking/decontamination pad as shown on the contract drawings. Trucks shall enter and exit the site utilizing the anti-tracking pad.
- B. Contractor shall be responsible for the management and removal from Site of the anti-tracking pad, material accumulated from the pad, and material accumulated from catch basin filter fabrics.
- C. Haul truck cargo areas shall be securely and completely covered during material transport on public roadways.
- D. Vehicle mud and dirt carryout, material spills, and soil wash-out onto public roadways and walkways and other paved areas shall be cleaned up immediately.
- E. The Contractor is responsible for daily clean-up of public roadways and walkways affected by work of this Contract. A wet spray power vacuum street sweeper shall be used on paved roadway. Dry power sweeping is prohibited.

3.03 CONTROL OF EARTHWORK DUST:

- A. During batch drop operations (i.e., earthwork with front-end loader, clamshell bucket, or backhoe) the free drop height of excavated or aggregate material shall be reduced as much as practical to minimize the generation of dust.

3.04 CONTROL OF STOCKPILE DUST:

- A. The Contractor shall use the following methods to control dust and wind erosion of active and inactive stockpiles:
 - 1. Wet suppression without wetting agent during active stockpile load-in, load-out, and maintenance activities.
 - 2. Polyethylene tarps on stockpiles shall be placed both below and on top of stockpiles, and secured with sandbags or an equivalent method to prevent the cover from being dislodged by the wind. The Contractor shall repair or replace covers whenever damaged or dislodged, at no additional cost to the Owner.
 - 3. The tarps shall be bermed 12-inches high at all edges to prevent any infiltration of storm water or exfiltration of leachate.

- B. The methods to be used shall be submitted to the Engineer as part of the Dust Control Plan.

3.05 DEMOLITION DUST CONTROL MEASURES:

- A. The Contractor shall use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in the air to the lowest practical level. Sufficient water shall be supplied for the building, demolition-related debris, and site compacting to meet Federal, State, and local air-quality regulations and to minimize dust during demolition.
- B. Closed chutes shall be used for the handling of debris. Dropping or throwing of debris is prohibited.
- C. Non-asbestos containing debris may be stockpiled in accordance with Section 02 41 16 – DEMOLITION. Debris shall be removed promptly from the site.
- D. During transport of debris, the truck cargo area shall be securely covered.
- E. Removal of asbestos-containing material shall be in accordance with Section 02 82 33 - ASBESTOS ABATEMENT.

END OF SECTION

**SECTION 01 22 00
MEASUREMENT AND PAYMENT**

1.01 GENERAL

- A. The following sections describe the measurement and payment for the work to be done under the respective items listed in the FORM OF GENERAL BID.
- B. The lump sum price stated in the FORM OF GENERAL BID shall constitute full compensation as herein specified, for all of the work completed in accordance with the drawings and specifications. All other activities required in connection with performance of the work, including all work required under Division 1, GENERAL REQUIREMENTS, whether described in the contract documents or mandated by applicable codes, permits and laws, will not be separately paid for unless specifically provided for in the form of general bid, but will be considered to be incidental to performance of the overall project.

1.02 SUBMITTALS

- A. Schedule of Values: The Contractor shall submit a schedule of values. The schedule of values shall include line items to a sufficient level of detail to track work progress.

ITEM 1 – ABATEMENT AND DEMOLITION OF FORMER W.W. CROSS PROPERTY

The lump sum price for Item 1 shall constitute full compensation for furnishing all labor, materials, tools and equipment and constructing the project, complete, as shown on the drawings and called for in the specifications.

END OF SECTION

SECTION 01 31 43
PERMITS

PART 1 – GENERAL

1.01 DESCRIPTION:

- A. This Section provides specific information and defines specific requirements of the Contractor regarding the preparation and acquisition of permits required to perform the work of this Project. This Section also provides specific information and defines specific requirements of the Contractor regarding the termination of existing services. The permits and terminations required include, but are not limited to, those specifically described in this Section.
- B. The following items are addressed in this Section.
 - 1. Building Demolition Permit – Town of Jaffrey Inspection Services Department
 - 2. Jaffrey Water Division
 - 3. Department of Environmental Services (DES) and Environmental Protection Agency (EPA) Notification and Permits
 - 4. Stormwater Pollution Prevention Plan
 - 5. NPDES Stormwater Discharge and Construction Site Dewatering Permits:
 - 6. Jaffrey Fire Department

1.02 RELATED WORK:

- A. Section 01 11 00 – CONTROL OF WORK AND MATERIALS
- B. Section 01 12 16 – SCOPE AND SEQUENCE OF WORK
- C. Section 02 41 13.36 – UTILITY ABANDONMENT
- D. Section 02 41 16 – DEMOLITION
- E. Section 02 41 80 – ASBESTOS ABATEMENT

1.03 GENERAL PERMIT AND TERMINATION REQUIREMENTS:

- A. The Contractor shall apply for, obtain, and pay for all permits, bonds, and licenses required, including but not limited to the permits listed below. Contractor shall also be responsible for all fees and costs associated with decommissioning and terminations of services.
- B. The Contractor shall procure all other permits, licenses, bonds, and approvals from Federal, State, and local authorities and such other agencies as may be necessary in connection with the work of this Contract.
- C. The Contractor shall perform the work in accordance with the Contract Documents, and any applicable Federal, State, and local requirements, and permits.

- D. The Contractor shall provide all required certificates to show that the work has been completed in conformity with the permits and shall submit such Certificates of Approval to the Engineer before final acceptance of the work.
- F. Terminate electrical services in accordance with the requirements of the governing utility and as specified on the Contract Drawings.
- E. Refer to the Contract Drawings showing the approximate locations of utilities at the Site. The Contractor shall note that the utility information shown may not reflect actual field conditions.

1.04 DEMOLITION PERMIT

- A. Demolition permitting is the responsibility of the Contractor. Demolition permitting for demolition of structures under this Contract will be obtained from the New Hampshire DES and from the Town of Jaffrey.
- B. When making an application for a Building Demolition Permit from the NHDES, the Contractor shall submit an Asbestos Demolition/Renovation Notification Form (NHDES-A-01-016) for the Building. The application shall be prepared in accordance with RSA 141-E:4 I and II and Env-A 1800. The Contractor shall complete the applications and obtain all necessary signatures, including property owner, authorizing agent, and professional engineer as appropriate, prior to submitting the applications.

1.05 UTILITY DISCONNECTION PERMITS:

- A. Contractor shall coordinate with electric, gas, telephone, and any other active utilities for cut/cap requirements and obtain and pay for all required permits for utility disconnections, as required

1.06 JAFFREY WATER DIVISION:

- A. The Contractor shall coordinate with the Jaffrey Water Division prior to commencing water and sewer utility disconnection. Water and sewer utility work shall be performed in accordance with all Jaffrey Water Division requirements.

1.07 NOTIFICATIONS:

- A. The Contractor shall make the appropriate notifications to DES and the EPA including, but not limited to, the DES notification prior to asbestos abatement (NHDES-A-01-016) and EPA notification required under the Federal National Emission Standards for Hazardous Air Pollutants.

1.08 NPDES STORMWATER DISCHARGE AND CONSTRUCTION SITE DEWATERING PERMITS:

- A. The Contractor shall comply with EPA's Construction General Permit, as required, and obtain the NPDES Stormwater Discharge Permit, as required, and shall prepare a Stormwater Pollution Prevention Plan in accordance with the permit requirements.

1.09 STORMWATER POLLUTION PREVENTION PLAN:

- A. The Contractor shall prepare a Stormwater Pollution Prevention Plan (SWPPP), as required by the Environmental Protection Agency (EPA).

1.10 JAFFREY FIRE DEPARTMENT

- A. The Contractor shall coordinate with the Jaffrey Fire Department prior to removal of the AST. Contractor shall acquire all permits required to remove and dispose of the AST with the Jaffrey Fire Department prior to beginning the work.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

END OF SECTION

SECTION 01 32 16
CONSTRUCTION SCHEDULING

PART 1- GENERAL

1.01 PROGRAM DESCRIPTION:

- A. The Contractor shall be responsible for scheduling activities and the activities of any subcontractors involved, to meet the completion date, or milestones, established for the Contract. Scheduling of the work shall be coordinated with the Owner and Engineer.
- B. A construction schedule shall be used to control the work of this Contract and to provide a definitive basis for determining job progress. The construction schedule and updates shall be prepared by the Contractor and coordinated with the Engineer and Owner. All work shall be done in accordance with the established schedule and the Contractor and his/her subcontractors shall be responsible for cooperating fully with the Engineer and the Owner in effectively utilizing the schedule.
- C. The Contractor shall submit a schedule for approval by the Engineer prior to initiation of work. The schedule shall consist of a Gantt Chart showing the scope of work tasks and the project completion dates described in Advertisement for Bids. The schedule shall include, but not limited to, the following: permitting, submittal preparation, site mobilization, site work, environmental protection, utility abandonment, abatement and demolition activities, site restoration, project closeout, and demobilization.

1.02 QUALIFICATIONS:

- A. The Contractor shall have the capability of preparing and utilizing the specified Critical Path Method (CPM) scheduling technique. A statement of CPM capability shall be submitted by the Contractor in writing to the Engineer within 10 days after the issuance of the Notice to Proceed to verify that either the Contractor's organization has in-house capability qualified to use the technique or that the Contractor employs a consultant who is so qualified. Capability shall be verified by description of the construction projects to which the Contractor or his consultant has successfully applied the CPM scheduling technique and which were controlled throughout the duration of the project by means of systematic use and updating of a computer-based CPM schedule. The submittal shall include the name of the individual on the Contractor's staff who will be responsible for the CPM schedule and for providing the required updating information.

1.03 SUBMITTALS:

- A. Submit under provisions of Section 01 33 23 - SUBMITTALS.
- B. Within 10 days following the issuance of the Notice to Proceed, the Contractor shall submit the CPM Schedule to the Engineer for review and acceptance. The Contractor shall submit to the Engineer a preliminary network defining the planned operations during the duration of the project after the issuance of the Notice to Proceed. Cost of activities expected to be completed or partially completed before submission and approval of the complete network shall be included.
- C. Prior to performing any work at the Site, the Contractor shall submit a detailed schedule to the Engineer and Owner for review.
- D. The schedule shall be updated by the Contractor on a weekly basis and submitted to the Engineer and Owner for review.

1.04 RESPONSIBILITY FOR SCHEDULE COMPLIANCE

- A. Whenever it becomes apparent from the current schedule that delays have resulted and the Contract completion dates will not be met, or when so required by the Engineer, the Contractor shall take some or all of the following actions at no additional cost to the Owner. He shall submit to the Engineer for approval, a written statement of the steps he intends to take to remove or arrest the delay to the critical path in the approved schedule.
 - 1. Increase construction manpower in such quantities and crafts as will substantially eliminate the backlog of Work.
 - 2. Increase the number of working hours per shift, shifts per day, working days per week, the amount of construction equipment, or any combination of the foregoing, sufficiently to substantially eliminate the backlog of work.
 - 3. Reschedule activities to achieve maximum practical concurrency of accomplishment of activities and comply with the revised schedule.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

3.01 SCHEDULING REQUIREMENTS:

- A. The schedule shall show the order and inter-dependence of activities and the sequence in which the work is to be accomplished as planned by the Contractor. The basic concept of a network analysis diagram shall be followed to show how the start of a given activity is dependent on the completion of preceding activities and its completion restricts the start of following activities.

END OF SECTION

**SECTION 01 33 23
SUBMITTALS**

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. The Contractor shall provide the Engineer with submittals as required by the contract documents.

1.02 RELATED WORK:

a

- A. Divisions 1 – 33 of these specifications that require submittals.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.01 GENERAL:

- A. As required by the General Conditions, Contractor shall submit a schedule of shop and working drawing submittals.
- B. The Contractor shall submit the shop and working drawing submittals electronically as specified below.

3.02 ELECTRONIC SUBMITTAL PROCEDURES:

A. Summary

1. Shop drawing and product data submittals shall be transmitted to Engineer in electronic (PDF) format using a submittal management website service designed specifically for transmitting submittals between construction team members. The Contractor's selected submittal management website service shall require written approval from Engineer.
2. The intent of electronic submittals is to expedite the construction process by reducing paperwork, improving information flow, and decreasing turnaround time.
3. The electronic submittal process is not intended for color samples, color charts, or physical material samples.

B. Procedures

1. Contractor shall be responsible for preparing and managing the submittal management website service at no additional cost to Owner.
2. Submittal Preparation - Contractor may use any or all of the following options:
 - a. Subcontractors and Suppliers provide electronic (PDF) submittals to Contractor via the submittal management website service.
 - b. Subcontractors and Suppliers provide paper submittals to Contractor who electronically scans and converts to PDF format.

- c. Subcontractors and Suppliers provide paper submittals to Scanning Service which electronically scans and converts to PDF format.
 - 3. Contractor shall review and apply electronic stamp certifying that the submittal complies with the requirements of the Contract Documents including verification of manufacturer / product, dimensions and coordination of information with other parts of the work.
 - 4. Contractor shall transmit each submittal to Engineer using the selected submittal management website service and email submittal to the Engineer and Owner.
 - 5. Engineer review comments will be made available on the submittal management website for downloading. Contractor will receive email notice of completed review.
 - 6. Distribution of reviewed submittals to subcontractors and suppliers is the responsibility of the Contractor.
- C. Costs
- 1. Costs associated with the submittal management website service shall be the responsibility of the Contractor.
- D. Electronic Submittals
- 1. In accordance with the accepted schedule, the Contractor shall submit promptly to the Engineer by submittal management website service, one electronic copy in Portable Document Format (PDF) of shop or working drawings required, as noted in the specifications, of equipment, and materials fabricated and utilized especially for this Contract.
 - 2. The Contractor shall receive a shop drawing memorandum with the Engineer's approval or comments via the submittal management website service.
- 3.03 SHOP AND WORKING DRAWINGS:
- A. Shop and working drawings shall show the principal dimensions, weight, structural and operating features, space required, clearances, type and/or brand of finish of shop coat, grease fittings, etc., depending on the subject of the drawings. When it is customary to do so, when the dimensions are of particular importance, or when so specified, the drawings shall be certified by the manufacturer or fabricator as correct for this Contract.
 - B. All shop and working drawings shall be submitted to the Engineer by and/or through the Contractor, who shall be responsible for obtaining shop and working drawings from its subcontractors and returning reviewed drawings to them. All shop and working drawings shall be prepared on standard size, 24-inch by 36-inch sheets, except those, which are made by changing existing standard shop or working drawings. All drawings shall be clearly marked with the names of the Owner, Project, Contractor and building, equipment or structure to which the drawing applies, and shall be suitably numbered. Each shipment of drawings shall be accompanied by a standard shop drawing transmittal form approved by the Engineer on which a list of the drawings, descriptions and numbers and the names mentioned above.
 - C. Only drawings that have been prepared, checked and corrected by the fabricator should be submitted to the Contractor by its subcontractors and vendors. Prior to submitting drawings to the Engineer, the Contractor shall check thoroughly all such drawings to satisfy himself that the subject matter thereof conforms to the Contract Documents in all respects. Shop drawings shall be reviewed and marked with the date, checker's name and indication of the Contractor's approval, and only then shall be submitted to the Engineer. Shop drawings unsatisfactory to

the Contractor shall be returned directly to their source for correction, without submittal to the Engineer. Shop drawings submitted to the Engineer without the Contractor's approval stamp and signature will be rejected. Any deviation from the Contract Documents indicated on the shop drawings must be identified on the drawings and in a separate submittal to the Engineer, as required in this section of the specifications and General Conditions.

- D. The Contractor shall be responsible for the prompt submittal and resubmittal, as necessary, of all shop and working drawings so that there will be no delay in the work due to the absence of such drawings.
 - E. The Engineer will review the shop and working drawings as to their general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. The Engineer's comments made on the drawings during the review do not relieve the Contractor from compliance with requirements of the Contract Documents. The Contractor is responsible for: confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating its work with that of all other trades; and performing its work in a safe and satisfactory manner. The review of the shop drawings is general and shall not relieve the Contractor of the responsibility for details of design, dimensions, code compliance, etc., necessary for interfacing with other components, proper fitting and construction of the work required by the Contract and for achieving the specified performance. The Engineer will review submittals two times: once upon original submission and a second time if the Engineer requires a revision or corrections. The Contractor shall reimburse the Owner amounts charged to the Owner by the Engineer for performing any review of a submittal for the third time or greater.
 - F. With few exceptions, shop drawings will be reviewed and returned to the Contractor within 14 days of submittal.
 - G. No material or equipment shall be purchased or fabricated especially for this Contract nor shall the Contractor proceed with any portion of the work, the design and details of which are dependent upon the design and details of equipment or other features for which review is required, until the required shop and working drawings have been submitted and reviewed by the Engineer as to their general conformance and compliance with the project and its Contract Documents. All materials and work involved in the construction shall then be as represented by said drawings.
 - H. Copies of the shop and working drawings and/or catalog cuts will be returned to the Contractor via the submittal management website service.
- 3.04 SAMPLES:
- A. Samples specified in individual Sections include, but are not necessarily limited to, physical examples of the work such as sections of manufactured or fabricated work, small cuts or containers of materials, complete units of repetitively-used products, color/texture/pattern swatches and range sets, specimens for coordination of visual effect, graphic symbols, and

- units of work to be used by the Engineer or Owner for independent inspection and testing, as applicable to the work.
- B. The number of samples submitted shall be as specified. Submittal and processing of samples shall follow the procedures outlined for shop and working drawings unless the specifications call for a field submittal or mock-up.
 - C. Acceptance of samples will be acknowledged via a copy of the transmittal noting status. When samples are not acceptable, prompt resubmittal will be required.

END OF SECTION

SECTION 01 35 29
HEALTH AND SAFETY PLAN

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. Prior to the start of work on the site, Contractor shall prepare and submit a site-specific health and safety plan that includes consideration of all known and potential hazards at the site. Work may not proceed at the project site until the Contractor's health and safety plan has been received and reviewed by the Engineer.
- B. The project involves the handling of hazardous materials impacted with asbestos and lead. Asbestos containing materials (ACM) include but are not limited to caulking found in windows throughout the building, roofing materials, and tiling found in the original structure. Lead-based paint (LBP) was identified on numerous painted surfaces throughout the building. See Specification Section 02 82 33 – ASBESTOS ABATEMENT, the attached *Hazardous Building Materials Inventory*, and Section 02 80 00.13 – REMOVAL OF UNIVERSAL AND HAZARDOUS WASTE FROM BUILDINGS.
- C. There are contaminated soils and groundwater at the suite. No soils or groundwater shall be removed from the site; however, the Contractor will be required to handle soils during certain site activities (e.g. utility abandonment, test pitting, etc.) The Site is a regulated Site by the New Hampshire Department of Environmental Services (NHDES). Site files can be seen at NHDES online database ONESTOP, Site #198708007. The Contractor is responsible for the health and safety of its employees.

1.02 REFERENCES:

- A. OSHA 29 CFR 1910.120

1.03 PREPARATION OF A SITE-SPECIFIC HEALTH AND SAFETY PLAN:

- A. Prior to the start of work on the Site, and no later than seven (7) calendar days after the date of the Notice to Proceed, Contractor shall prepare and submit an initial Site-specific Health and Safety Plan which includes consideration of all known and potential hazards at the Site. Work may not proceed at the project Site until the Contractor's Health and Safety Plan has been received by Engineer.
- B. Site-specific health and safety procedures as specified herein are required due to potentially hazardous conditions that may be encountered during handling, sampling, treatment, removal and disposal of contaminated and/or hazardous material. These procedures shall be described in the Health and Safety Plan prepared by the Contractor. The Health and Safety Plan shall be submitted to the Engineer for review, before any work can be initiated. The Contractor is responsible for its workers' and Subcontractors' health and safety and the monitoring and control of dust and odor migration from the Site. Therefore, the Engineer will only review the Contractor's Health and Safety Plan for relevant content. The Contractor shall implement, maintain, and enforce these procedures during all phases of the Work associated with the description of work described in this Section.
- C. It is the responsibility of the Contractor to implement engineering controls, at no additional cost to the Owner, to control and reduce fugitive air emissions, noise, and odors that exceed nuisance levels as specified in the Contract Documents.

- D. This Section describes the minimum health and safety requirements during completion of the Site work. The Contractor shall develop a detailed Health and Safety Plan based on all applicable regulations. The Health and Safety Plan must establish in detail the protocols necessary for protecting workers, on-Site personnel, visitors and potential off-Site receptors from potential hazards that may be encountered during remediation activities.
- a
 - E. The Health and Safety Plan shall include Site access provisions that effectively limit access to work areas to only those persons in full compliance with the requirements of the Occupational Safety and Health Administration (OSHA) 29 Code of Federal Regulations (CFR) 1910.120.
 - F. The Contractor's Health and Safety Plan shall include a detailed description of the method of operations to be implemented during construction activities.
 - G. It shall be the Contractor's responsibility to notify the Engineer orally and in writing as quickly as possible should any unforeseen safety hazard or condition become evident during the performance of the work. In the interim, the Contractor shall take prudent action to establish and maintain safe working conditions and to safeguard employees, the public, and the environment.
 - H. Any disregard for the provisions of these Specifications shall be deemed just and sufficient cause for the termination of the Contractor or any lower-tier subcontractor without compromise or prejudice to the rights of the Contractor or subcontractor.
 - I. The Contractor shall be cognizant of the minimum health and safety plan standards set forth in 29 CFR 1910.120 and 29 CFR 1926. The Health and Safety Plan shall include, but not be limited to, the following minimum requirements:
 - 1. Identification of Contractor's Site Safety Officer.
 - 2. Identification of Hazards and Risks Associated with Project.
 - 3. Contractor's Standard Operating Procedures, Including Personnel Training and Field Orientation.
 - 4. Respiratory Protection Training Requirements.
 - 5. Levels of Protection and Selection of Equipment Procedures.
 - 6. Type of Medical Surveillance Program.
 - 7. Personal Hygiene Requirements and Guidelines.
 - 8. Zone Delineation of the Project Site.
 - 9. Site Security and Entry Control Procedures.
 - 10. Field Monitoring of Site Contaminants.
 - 11. Contingency and Emergency Procedures.
 - 12. Listing of Emergency Contacts

1.04 PERSONAL PROTECTIVE EQUIPMENT

- A. The personal protective equipment required to provide the appropriate level of dermal and respiratory protection shall be determined based on the results of continuous air monitoring performed by the Contractor and the standards set forth in the Contractor's health and safety plan. The Engineer may conduct duplicate air monitoring for quality control purposes. Modified Level D protection shall be the minimum requirement for all on-site personnel.

1.05 RELATED WORK:

- A. Section 01 14 19.16 – DUST CONTROL
- B. Section 02 41 16 – DEMOLITION
- C. Section 02 41 80 – ASBESTOS ABATEMENT

PART 2 – PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

**SECTION 01 37 00
SCHEDULE OF VALUES**

PART 1 - GENERAL

1.01 SUMMARY:

A. Section Includes:

1. Provide Schedule of Values covering each bid item.

B. Related Sections:

1. Section 01 22 00 – MEASUREMENT AND PAYMENT
2. Section 01 33 23 – SUBMITTALS

1.02 SUBMITTALS:

A. Submit the following in accordance with Section 01 33 23 – SUBMITTALS:

1. Schedule of Values.
 - a. Submit draft Schedule of Values within 5 days of NTP.
 - b. Revise and resubmit Schedule of Values until acceptable to the Engineer.
2. Itemize separate line item cost for work comprising each lump sum bid item:
 - a. Ensure that the sum of the items listed in the Schedule of Values for each lump sum item equals the price bid for the respective lump sum item.
3. Work requiring verification of proper disposal
 - a. A separate line item shall be included for any items requiring documentation of proper legal disposal. Payment shall be withheld pending submission of required documentation (e.g., certified weight slips and signed disposal documentation).
4. Schedule of Values shall include an item for Close-Out Documentation & Reports
5. An unbalanced Schedule of Values providing for overpayment on items of work performed first will not be accepted.

1.03 SEQUENCING AND SCHEDULING:

- A. Before submitting any application for payment, obtain the Engineer's approval of the Schedule of Values.

Weston & Sampson Engineers, Inc.

BID

January 15, 2025

Town of Jaffrey

Abatement and Demolition of Former W.W. Cross Property

IFB #2025-1

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

END OF SECTION

SECTION 01 52 13
TEMPORARY FACILITIES

PART 1 - GENERAL

1.01 SCOPE OF WORK:

- A. The Contractor shall provide all temporary facilities as described in this Section for the proper completion of the work, as required and as specified.

1.02 TEMPORARY TOILETS:

- A. The Contractor shall provide and pay all costs for toilet booths with chemical type toilets, as necessary for all persons engaged in the Work.

1.03 TEMPORARY WATER:

- A. The Contractor shall make all arrangements for obtaining temporary water connections including extensions required for the needs of the Project, and shall pay all costs incurred. It shall furnish, install, and remove all equipment and piping required to provide temporary water. See Section 01 14 00 – SPECIAL PROVISIONS for additional information.
- B. All water used for construction purposes shall be metered as follows:
 - (a) All persons desiring to use such water from a hydrant or any other appurtenances shall coordinate with the Jaffrey Water Division.

1.04 TEMPORARY ELECTRICITY:

- A. The Contractor shall at his own expense make all arrangements for and provide all temporary light and power for all Subcontractors and trades, except as otherwise specified herein. The temporary electrical service shall include, but not be limited to, all labor, materials, and equipment necessary to supply temporary power of adequate capacity for the Project operations and testing. Transformers and meters, when required by the power company will be furnished and installed by the appropriate power company, and the Contractor shall pay all costs therefor.
- B. The Contractor shall pay the cost of all electrical energy consumed during prosecution of the Work. The Contractor at his own expense shall maintain all lamps in operating condition. The Contractor and each Subcontractor shall furnish their own extension cords and all additional lamps as they may require. Temporary wiring of a special nature not otherwise specified, shall be furnished, installed, maintained, and paid for by the trade requiring such wiring.
- C. All temporary work shall be furnished and installed in conformity with the National Electrical Code and state and city laws, and requirements of the applicable power company.
- D. The Contractor shall dismantle and completely remove from the Project all temporary wiring and other temporary electrical accessories only when the permanent electrical system has been installed and in operation, and then only with written approval of the Engineer.

1.05 TEMPORARY STRUCTURES:

- A. The Contractor shall provide, maintain, and remove such additional storage sheds, temporary buildings, or trailers as required for performance of the Work. Location of all such temporary structures shall be acceptable to the Engineer. If the Contractor is required to relocate these Temporary Structures during the prosecution of the Work, the Contractor shall promptly do so at no increase in Contract Price or Contract Time.

PART 2 - PRODUCTS

NOT PART OF THIS SECTION

PART 3 - EXECUTION

3.01 UTILITIES:

- A. All monthly service charges for telephone, electricity, Dial-Up connection service, water supply, and heating of the Temporary Structures shall be paid for by the Contractor.

3.02 TEMPORARY FACILITIES:

- A. The CONTRACTOR shall perform the following work:
 - 1. Protect excavations, trenches, buildings, and materials always from rain and/or ground water, and from water damage of any origin. Provide all pumps, piping, coverings, and other materials and required equipment as specified.
- B. After the Work of a Subcontractor has been properly completed, the Contractor shall be responsible for its protection and for repairing, replacing, or cleaning any such Work which has been damaged by other Subcontractors or trades or by any other cause, so that the entire Work is in perfect condition at the time of Substantial Completion.

END OF SECTION

SECTION 01 55 26.13
SIGNAGE (TRAFFIC CONTROL)

PART 1 - GENERAL

1.01 WORK INCLUDED:

This Section covers furnishing and installing traffic control signs and other devices.

1.02 SYSTEM DESCRIPTION:

The Contractor shall furnish and install all construction signs deemed necessary by and in accordance with the latest edition of Part VI of the Manual on Uniform Traffic Control Devices (MUTCD) as published by the U.S. Department of Transportation.

1.03 RELATED WORK:

- A. Section 01 11 00 – CONTROL OF WORK AND MATERIALS
- B. Section 01 14 00 – SPECIAL PROVISIONS
- C. Section 01 57 19 – ENVIRONMENTAL PROTECTION
- D. Section 02 41 16 – DEMOLITION

PART 2 - PRODUCTS

2.01 TRAFFIC WARNING AND REGULATING DEVICES:

- A. Contractor shall provide warning signs, barricades and other devices in accordance with the specifications provided in the MUTCD. Size of signs, lettering, colors, method of support and other factors prescribed in the MUTCD shall be adhered to.
- B. See Section 01 11 00 – CONTROL OF WORK AND MATERIALS and Section 01 14 00 – SPECIAL PROVISIONS for additional construction signage requirements. Locations, wording, and size of signs shall be coordinated with Owner after the Contract is awarded.

PART 3 - EXECUTION

3.01 GENERAL:

- A. Contractor shall erect traffic signs, and other traffic control devices as required by the Manual on Uniform Traffic Control Devices as published by the U.S. Department of Transportation, this Section, and the Contract Drawings, or as required by the Engineer, to provide traffic safety and convenience, and to protect the work area from traffic, pedestrians, and animals.
- B. When the work has been completed, unless otherwise required by the Engineer, all traffic devices used by the Contractor shall be removed.
- C. Contractor shall relocate barricades, signs, and other devices as necessary as the work progresses.
- D. Unless permission to close the street is received in writing from the Owner, all excavated materials and equipment shall be placed so that vehicular and pedestrian traffic may be maintained at all times.
- E. Provision shall be made for safe passage at all times for emergency vehicles onto the work site.

- F. Provision shall be made for safe passage at all times for emergency egresses of neighboring residences or buildings.

END OF SECTION

SECTION 01 56 26
TEMPORARY CHAIN LINK FENCE

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. The Contractor shall provide all labor, materials and appurtenances necessary for the installation and maintenance of 6-foot temporary fence. The fence shall remain in place for the subsequent remediation phase and will be dismantled by others.
- B. The Contractor shall be responsible for securing the site from trespassers. Existing fencing exists on portions of the site as shown on the Contract Drawings. The Contractor shall install temporary fencing across lengths of damaged/unsuitable fencing to secure the site and prevent trespassers.

1.02 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF SECTION 01 33 23 SUBMITTALS, SUBMIT THE FOLLOWING:

- A. Manufacturer's literature of the materials specified herein.
- B. Shop drawings of the temporary chain link fence and gates.
 - 1. Shop drawings shall indicate layout of temporary fencing, location and size of gates, existing pavement and roads, and other site-specific conditions. Prepare drawing after site observation and verification of existing conditions.

PART 2 - PRODUCTS

2.01 TEMPORARY CHAIN LINK FENCING

- A. Unless otherwise indicated, type of 6-foot temporary chain link fencing shall be Contractor's option. Following types are acceptable:
 - 1. New materials or previously used salvaged chain link fencing in good condition.
 - 2. Posts: Galvanized steel pipe of diameter to provide rigidity. Post shall be suitable for setting in concrete footings, driving into ground, anchoring with base plates, or inserting in precast concrete blocks.
 - 3. Fabric: Woven galvanized steel wire mesh. Provide in continuous lengths to be wire tied to fence posts or prefabricated into modular pipe-framed fence panels.
- B. Gates: Provide gates of the quantity and size indicated on the Contract Drawings or required for functional access to Site.
 - 1. Fabricate of same material as used for fencing.
 - 2. Vehicle gates:
 - a. Minimum width: 20 feet to allow access for emergency vehicles.
 - b. Capable of manual operation by one person.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. The fence and gates shall be erected by skilled mechanics in accordance with the recommendations of the manufacturer and these specifications. These specifications shall take precedence over the recommendations of the manufacturer if any discrepancy exists between them.
- B. Driven Posts
 - 1. Steel plates or precast concrete blocks shall not be allowed to secure fence posts. All posts shall be driven into the ground.
 - 2. Maximum post spacing shall be 10-feet. Post spacing shall be uniform and posts shall be plumb.
 - 3. Drive posts, set in holes, and backfill.
 - 3. For soft and unstable ground conditions, cast concrete plug around post.
 - 4. Posts over pavement: Drive posts through pavement.
 - 5. Gate posts: Use bracing or concrete footings to provide rigidity for accommodating size of gate.
 - 6. Temporary terminal posts shall be securely connected to existing fence posts to prevent site access/trespassing.
- C. Securely attach wire fabric to posts. Maximum area of unbraced fence fabric shall not exceed 1,500 square feet.
- D. Install with required hardware.
- E. Fabric shall be stretched taut, with the bottom edge following the existing grade, and shall be a continuous mesh between terminal posts. Each span of fabric shall be attached independently at terminal posts. Where terminal posts do not have provisions for weaving fabric to posts, stretcher bars shall be placed through the end weave of the fabric and secured to the post with bar bands spaced not more than 15-inches apart on the post. Temporary terminal posts shall be secured to existing fence posts to prevent Site access/trespassing.
- F. Fabric shall be attached with ties to line posts at intervals of not more than 14-inches (and to the top railing and braces at intervals not exceeding 24-inches).
- G. The bottom tension wire shall be interlaced in the weave of the fabric, pulled taut and fastened to terminal posts.

3.02 MAINTENANCE AND REMOVAL

- A. Maintain fencing in good condition. If damaged, immediately repair.
- B. Temporary fencing shall remain upon completion of Work.

END OF SECTION

SECTION 01 57 16
PEST CONTROL

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. This section specifies requirements for rodent control activities by the Contractor at all work and laydown (or staging) areas in connection with this Contract.
- B. The Contractor shall retain the services of a licensed rodent exterminator to conduct an inspection of the work and laydown areas and report on the presence of rodents and take any necessary measures to eliminate existing rodent populations prior to start of work.

1.02 SUBMITTALS:

- A. Within ten days after Notice to Proceed, submit to the Engineer a written description of rodent control measures to be used and the areas to be included in the program.
- B. Provide the name and background of the licensed rodent exterminator retained to provide any necessary rodent eradication measures prior to start of work.

PART 2 - PRODUCTS

2.01 CONTAINERS:

Use metal or heavy-duty plastic refuse containers with tight-fitting lids for disposal of all garbage, or trash associated with food. These containers shall not have openings that allow access by rodents.

PART 3 - EXECUTION

3.01 WORK AND LAYDOWN AREAS WITHIN THE CONTRACT AREA:

- A. Before mobilization begins, obtain written verification from the rodent exterminator that rodent populations have been effectively controlled in areas to be occupied.
- B. Following site clearing and before demolition, excavation, or construction, inspect work and laydown areas and remove all remaining trash, debris, and weeds.
- C. Maintain work and laydown areas free of trash, garbage, weeds, and debris. Provide and enforce proper use of refuse containers to ensure that rodents and other pests are not harbored or attracted.
- D. Designate specific locations as lunch and coffee break areas to prevent random disposal of garbage and trash. Keep those areas free of litter and garbage, and provide refuse containers as described in 2.01 of this section. Keep refuse containers upright with their lids shut tight.
- E. Have all refuse containers emptied daily to maintain site sanitation.
- F. Notify the Engineer within 24 hours whenever rodents (rats or mice) or signs of rodent activity (burrows or droppings) are observed in work or laydown areas. Take appropriate action to locate and control the rodents.

3.02 LAYDOWN AREAS OUTSIDE THE CONTRACT AREA:

- A. Implement pest control at all laydown areas that are not areas of this Contract, but that are used by the Contractor in connection with this Contract. Undertake rodent control at least two weeks prior to use of the area and with time to ensure that the site is free of rodent populations (rats and mice) prior to site occupancy. Maintain the site free of rodents throughout the duration of its use.
- B. Clear laydown areas of trash, debris, and weeds prior to occupancy. Initiate those actions only after rodent populations have been effectively controlled.
- C. Maintain laydown areas free of trash, garbage, weeds, and debris. Provide and enforce proper use of refuse containers to ensure that rodents and other pests are not harbored or attracted.
- D. Dispose of all garbage or trash associated with food in refuse containers with tight-fitting lids as described in 2.01 of this Section. Have refuse containers emptied daily to maintain site sanitation.

END OF SECTION

SECTION 01 57 19
ENVIRONMENTAL PROTECTION

PART 1 – GENERAL

1.01 DESCRIPTION:

- A. The work covered by this section of the specifications consists of furnishing all labor, materials, tools and equipment and performing all work required for the prevention of environmental pollution during and as a result of construction operations under this contract.

1.02 RELATED WORK:

- A. Section 01 14 19.16 - DUST CONTROL
- B. Section 01 33 23 – SUBMITTALS
- C. Section 02 41 16 - DEMOLITION
- D. Section 31 00 00 - EARTHWORK
- E. Section 31 11 00 - CLEARING AND GRUBBING

1.03 SUBMITTALS:

- A. The Contractor shall submit for approval six sets of details and literature fully describing environmental protection methods to be employed in carrying out construction activities within 100 feet of wetlands or across areas designated as wetlands.

PART 2 - PRODUCTS

2.01 SILT FENCE:

- A. The silt fence shall consist of a 3-foot wide continuous length sediment control fabric, stitched to a mesh backing, and stapled to pre-weathered oak posts installed as shown on the drawings. The oak posts shall be 1-1/4-inches by 1-1/4-inches (Minimum Dimension) by 48-inches and shall be tapered. The bottom edge of the silt fence shall be buried as shown on the drawings.
- B. The silt fence shall be DOT Silt Fence PPDM3611, as manufactured by U.S. Silt & Site Supply/Getsco, Concord, NH, or approved equal.

C. Silt fence properties:

Physical Properties	Test Method	Minimum Value
Grab Strength, lbs.	ASTM-D-4632	124
Grab Elongation, %	ASTM-D-4632	15
Mullen burst, psi	ASTM-D-3786	300
Puncture, lbs.	ASTM-D-4833	65
Trapezoidal Tear, lbs.	ASTM-D-4533	65
UV Resistance ² , % ³	ASTM-D-4355	80@500 hrs.
AOS, US Sieve No.	ASTM-D-4751	30
Flow Rate, gal/min/sq ft	ASTM-D-4491	10
Permittivity, (1/sec)gal/min/sq ft	ASTM-D-4491	0.05 sec ⁻¹

2.02 STRAW WATTLES:

- A. Straw Wattles shall consist of a 100% biodegradable exterior jute or coir netting with 100% wheat straw interior filling as manufactured by GEI Works, Sebastian, Florida (Phone: 772-646-0597; website: www.erosionpollution.com), or approved equal.

2.03 CATCH BASIN PROTECTION:

- A. To trap sediment and to prevent sediment from clogging drainage systems, catch basin protection in the form of a siltation sack (Siltsack as manufactured by ACF Environmental, Inc. or approved equal) shall be provided as approved by the Engineer.

PART 3- EXECUTION

3.01 NOTIFICATION AND STOPPAGE OF WORK:

- A. The Engineer will notify the Contractor in writing of any non-compliance with permits. The Contractor shall, after receipt of such notice, immediately take corrective action. Such notice, when delivered to the Contractor or his authorized representative at the site of the work, shall be deemed sufficient for the purpose. If the Contractor fails to act promptly, the Owner may order stoppage of all or part of the work through the Engineer until satisfactory corrective action has been taken. No claim for an extension of time or for excess costs or damage incurred by the Contractor as a result of time lost due to any stop work orders shall be made unless it was later determined that the Contractor was in compliance.

3.02 AREA OF CONSTRUCTION ACTIVITY:

- A. Insofar as possible, the Contractor shall confine his construction activities to those areas defined by the plans and specifications. All land resources within the project boundaries and outside the limits of permanent work performed under this contract shall be preserved in their present condition or be restored to a condition after completion of construction at least equal to that which existed prior to work under this contract.

3.03 PROTECTION OF WATER RESOURCES:

- A. The Contractor shall not pollute streams, lakes or reservoirs with fuels, oils, bitumens, calcium chloride, acids or other harmful materials. It is the Contractor's responsibility to comply with all applicable Federal, State, County and Municipal laws regarding pollution of rivers and streams.
- B. Special measures should be taken to insure against spillage of any pollutants into public waters.

3.04 PROTECTING AND MINIMIZING EXPOSED AREAS:

- A. The Contractor shall limit the area of land which is exposed and free from vegetation during construction. In areas where the period of exposure will be greater than two (2) months, temporary vegetation, mulching or other protective measures shall be provided as specified.
- B. The Contractor shall take account of the conditions of the soil where temporary cover crop will be used to insure that materials used for temporary vegetation are adaptive to the sediment control. Materials to be used for temporary vegetation shall be approved by the Engineer.

3.05 LOCATION OF STORAGE AREAS:

- A. The location of the Contractor's storage areas for equipment and/or materials shall be upon cleared portions of the job site or areas to be cleared as a part of this project, and shall require written approval of the Engineer. Plans showing storage facilities for equipment and materials shall be submitted for approval of the Engineer.
- B. No debris piles shall be deposited within a minimum distance of one hundred (100) feet of any watercourse or any drainage facility. Adequate measures for erosion and sediment control such as the placement of baled straw around the downstream perimeter of stockpiles shall be employed to protect any downstream areas from siltation.
- C. The Engineer may designate a particular area or areas where the Contractor may store materials used in his operations.
- D. Storage areas in cross-country locations shall be restored to pre-construction conditions with the planting of native species of trees and shrubs.

3.06 PROTECTION OF LANDSCAPE:

- A. The Contractor shall not deface, injure, or destroy trees or shrubs nor remove or cut them without written authority from the Owner. No ropes, cables, or guys shall be fastened to or attached to any existing nearby trees for anchorages unless specifically authorized by the Engineer. Excavating machinery and cranes shall be of suitable type and be operated with care to prevent injury to trees which are not to be removed, particularly overhanging branches and limbs. The Contractor shall, in any event, be responsible for any damage resulting from such use.
- B. Branches, limbs, and roots shall not be cut except by permission of the Engineer. All cutting shall be smoothly and neatly done without splitting or crushing. When there is unavoidable injury to branches, limbs and trunks of trees, the injured portions shall be neatly trimmed and covered with an application of grafting wax or tree healing paint as directed.
- C. Where, in the opinion of the Engineer, trees may possibly be defaced, bruised, injured, or otherwise damaged by the Contractor's equipment or by his blasting or other operations, the

Engineer may require the Contractor to adequately protect such trees by placing boards, planks, poles or fencing around them. Any trees or landscape feature scarred or damaged by the Contractor's equipment or operations shall be restored as nearly as possible to its original condition at the expense of the Contractor. The Engineer will decide what method of restoration shall be used, and whether damaged trees shall be treated and healed or removed and disposed of.

- D. Cultivated hedges, shrubs, and plants which could be injured by the Contractor's operations shall be protected by suitable means or shall be dug up, balled and temporarily replanted and maintained. After construction operations have been substantially completed, they shall be replanted in their original positions and cared for until growth is re-established. If cultivated hedges, shrubs, and plants are injured to such a degree as to affect their growth or diminish their beauty or usefulness, they shall be replaced by items of a kind and quality at least equal to that existing at the start of the work.

3.07 ERECTION AND MAINTENANCE OF SILT FENCE:

- A. Where indicated on the drawings or where required by the Engineer, the Contractor shall erect and maintain a temporary silt fence. The silt fence shall be used specifically to contain sediment from runoff water and to minimize environmental damage caused by construction.

3.08 CATCH BASIN PROTECTION:

- A. Catch basin protection shall be used for every catch basin, shown on the plans or as required by the Engineer, to trap sediment and prevent it from clogging drainage systems and entering wetlands. Siltation sack shall be securely installed under the catch basin grate. Care shall be taken to keep the siltation sack from breaking apart or clogging. All deposited sediment shall be removed periodically and at times prior to predicted precipitation to allow free drainage flow. Prior to working in areas where catch basins are to be protected, each catch basin sump shall be cleaned of all debris and protected. The Contractor shall properly dispose of all debris at no additional cost to the Owner.
- B. All catch basin protection shall be removed by the Contractor after construction is complete.

3.09 STRAW WATTLES:

- A. The wattles will be placed in a shallow trench (2-3 inches deep) and staked in the ground using wooden stakes driven at 4-foot intervals. The wooden stakes will be placed at a minimum depth of 24-inches into the ground.
- B. The wattles shall be regularly inspected and before and after every forecasted major weather event. All deposited sediment shall be removed and not allowed to accumulate to the top of the wattles. Wattles damaged during construction shall be repaired or replaced as required by the Engineer at no additional cost to the Owner.
- C. The Contractor shall remove all wattles after construction is completed.

3.10 NOISE CONTROL:

- A. The Contractor shall adhere to the Town of Jaffrey's Noise Ordinance located in the *Code of the Town of Jaffrey*, Section 15301.
- B. The Contractor shall make special provisions to prevent excessive noise during demolition and construction. No heavy demolition and construction equipment or large engine vehicle shall be allowed to operate on the site between the hours of 5 PM and 7 AM, unless special permission

- is granted by the Owner. The Contractor shall construct sound enclosures or utilize other noise reduction techniques if the equipment does not meet the noise level requirements.
- C. When available, make the maximum use of "low noise emission products" as certified by EPA. No blasting or use of explosives is permitted.
 - D. Protect employees against noise exposure in accordance with the requirements of the Occupational Safety and Health Act of 1972.
 - E. Compliance with the requirements of this Section will not offer any relief from responsibility for compliance with local ordinances, regulations, and other Sections.
 - F. Compliance with the requirements of this Section will require the use of machines with effective mufflers or enclosures and selection of quieter alternative procedures.

END OF SECTION

**SECTION 01 74 13
CLEANING UP**

PART 1 - GENERAL

1.01 DESCRIPTION:

The Contractor must employ at all times during the progress of its work adequate cleanup measures and safety precautions to prevent injuries to persons or damage to property. The Contractor shall immediately, upon request by the Engineer provide adequate material, equipment and labor to cleanup and make safe any and all areas deemed necessary by the Engineer.

1.02 RELATED WORK:

- A. Section 01 11 00 - CONTROL OF WORK AND MATERIALS
- B. Section 01 14 00 - SPECIAL PROVISIONS
- C. Section 01 57 19 - ENVIRONMENTAL PROTECTION

PART 2 - PRODUCTS

Not applicable

PART 3 - EXECUTION

3.01 DAILY CLEANUP:

- A. The Contractor shall clean up, at least daily, all refuse, rubbish, scrap and surplus material, debris and unneeded construction equipment resulting from the construction operations and sweep the area. The site of the work and the adjacent areas affected thereby shall at all times present a neat, orderly and workmanlike appearance.
- B. Upon written notification by the Engineer, the Contractor shall within 24 hours clean up those areas, which in the Engineer's opinion are in violation of this section and the above referenced sections of the specifications.
- C. If in the opinion of the Engineer, the referenced areas are not satisfactorily cleaned up, all other work on the project shall stop until the cleanup is satisfactory.

3.02 MATERIAL OR DEBRIS IN DRAINAGE FACILITIES:

- A. Where material or debris has washed or flowed into or has been placed in existing watercourses, ditches, gutters, drains, pipes, structures, such material or debris shall be entirely removed and satisfactorily disposed of during progress of the work, and the ditches, channels, drains, pipes, structures, and work shall, upon completion of the work, be left in a clean and neat condition.

3.03 REMOVAL OF TEMPORARY BUILDINGS, STRUCTURES AND EQUIPMENT:

- A. On or before completion of the work, the Contractor shall, unless otherwise specifically required or permitted in writing, tear down and remove all temporary buildings and structures it built; shall remove all temporary works, tools and machinery or other construction equipment it furnished; shall remove all rubbish from any grounds which it has occupied; shall remove silt fences and hay bales used for trapping sediment; and shall leave the roads and all parts of the property and adjacent property affected by its operations in a neat and satisfactory condition.

3.04 RESTORATION OF DAMAGED PROPERTY:

- A. The Contractor shall restore or replace, when and as required, any property damaged by its work, equipment or employees, to a condition at least equal to that existing immediately prior to the beginning of operations. To this end the Contractor shall do as required all necessary highway or driveway, walk and landscaping work. Materials, equipment, and methods for such restoration shall be as approved by the Engineer.

3.05 FINAL CLEANUP:

- A. Before acceptance by the Owner, the Contractor shall perform a final cleanup to bring the construction site to its original or specified condition. This cleanup shall include removing all trash and debris off of the premises. Before acceptance, the Engineer shall approve the condition of the site.

END OF SECTION

SECTION 01 78 00
PROJECT CLOSEOUT

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. This Section covers administrative and procedural requirements for closing out the project, including, but not limited to:
 - 1. Project as-built documents
 - 2. Checkout and Certification
 - 3. Final Cleaning
 - 4. Substantial Completion
 - 5. Closeout Procedures
 - 6. Final Completion
- B. Closeout checklist to be completed by the ENGINEER.

1.02 RELATED WORK:

- A. General Requirements in their entirety.
- B. Section 01 74 13, CLEANING UP

1.03 AS-BUILT DOCUMENTS:

- A. The Contractor shall maintain on site, separate from the documents used for construction, one set of the documents listed below, and as construction progresses, shall legibly record on these documents all changes made during construction.
 - 1. Contract Drawings
 - 2. Specifications
 - 3. Addenda
 - 4. Change Orders and other Modifications to the Contract
 - 5. Reviewed shop drawings, product data, and samples
 - 6. Written interpretations and clarifications
 - 7. Field Orders
 - 8. Field test reports properly verified
- B. The completed set of As-Built Documents shall be submitted to the Engineer with the final Application for Payment. As-built documents shall include GPS coordinates, including depths below grade, for all utility corridor cuts/caps/abandonment and demolition locations. Utility terminations to be shown with GPS coordinates on the As-Built Documents include, but not limited to, the locations of all: cut and capped water mains; closed/capped corporation stops/water services; sewer pipes cut/capped; and cut/capped roof drains. Refer to Section 02 41 13.36 – UTILITY ABANDONMENT and the Contract Drawings. As-built documents shall include survey of final grades in CAD.

1.04 CHECKOUT AND CERTIFICATIONS:

- A. Prior to checkout and certifications the following tasks shall be completed:
 - 1. Construction shall be complete. For this purpose, completion of construction is defined as follows:

- a. The Contractor has completed construction and erection of the work in conformance with the Contract Drawings and Specifications.
 - 2. All shop drawings shall have final approval.
 - 3. All shop tests shall be complete and approved test results submitted to the Engineer.
- 1.05 FINAL CLEANING:
 - A. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion.
 - 1. Clean the site, including landscape development areas of rubbish, litter and other foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to smooth, even textured surfaces.
 - 2. Remove waste and surplus materials, rubbish, fencing equipment, temporary utilities and construction facilities from the site, unless otherwise required by the Engineer.
 - 3. Comply with requirements of Section 01 74 13 – CLEANING UP.
- 1.06 SUBSTANTIAL COMPLETION:
 - A. Substantial Completion is officially defined in the Advertisement for Bids. The date of substantial completion will be certified by the Engineer. This date will not be certified until the following requirements have been satisfied by the Contractor:
 - 1. All field tests have been satisfactorily completed and reports forwarded to the Engineer.
- 1.07 CLOSEOUT PROCEDURES:
 - A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and is complete in accordance with Contract Documents and ready for Engineer's and Owner's inspection.
 - B. Accompany Engineer and Owner on inspection to verify conformance with the Contract Documents. Prepare a punch list of work items that have been determined by inspection to not conform to Contract Documents. Punch list items shall include work items that are missing, incomplete, damaged, incorrect items, or improperly installed or constructed. The Contractor shall correct the punch list deficiencies by re-work, modifications, or replacement, as appropriate, until the items conform to the Contract Documents. The initial punch list shall be produced by the Contractor, with copies to the Engineer and Owner. When the Contractor has reduced the number of deficient items to a reasonable level, the Engineer will develop a definitive punch list for the use of the Contractor.
 - C. Provide submittals to Engineer that are required by governing or other authorities.
 - D. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due. The Contractor shall submit the following documents with or prior to Final Application for Payment: Set of as-built documents, Contract Completion and Acceptance Certificate, Consent of Surety to Final Payment, Release and Waiver of Liens and Claims, Affidavit of Payment of Debts and Claims, and remaining releases, waivers, warranties/guarantees, and all other data required by the Contract Documents.
- 1.07 CLOSEOUT SUBMITTALS

- A. The closeout submittals for each Project Milestone include but are not necessarily limited to:
 - a. Evidence of payment and release of liens.
 - b. Waste shipment manifests, Bills of Lading (if required), weight slips, and shipping records.
 - c. Records of quantities/weights of materials shipped off-site, including all contaminated materials to disposal facilities, construction and demolition debris to recycling/disposal facilities, and all recycled/reused materials.
 - d. All other records or documents as necessary (i.e. personal air sampling records, injury reports, etc.)
 - e. Construction photographs
 - f. As-built drawings, including survey/GPS information on locations of utility terminations and final site conditions.

1.08 FINAL COMPLETION

- A. Prior to final completion, the following tasks shall be completed:
 - 1. All items in the punch list shall be completed.
 - 2. All Contract closeout documentation shall be submitted to and accepted by the Engineer.

1.09 COMPLETION CHECKLIST:

- A. The Project Completion Checklist, which follows, and shall be completed as the project nears completion. When the project has been fully completed, Final Payment can be approved.

PROJECT COMPLETION CHECKLIST

Owner _____ Job No.

Project

As part of the project closeout, all items listed below must be checked off as being complete or otherwise accounted for. The person verifying completion of the item shall list the completion date and his/her initials.

Project Closeout Checklist		
	Date Completion Verified	Verified by
AS-BUILT DOCUMENTS HANDED OVER		
1. Contract Drawings		
2. Specifications		
3. Addenda		
4. Change Orders/Contract Modifications		
5. Reviewed Shop Drawings, Product Data and Samples		
6. Written Interpretations/Clarifications		
7. Field Orders		
8. Field Test Reports		
CHECKOUT AND CERTIFICATIONS		
1. Construction Complete per Drawings/Specifications		
2. All Shop Drawings have Final Approval		
3. All Shop Tests Complete and Results Submitted		

Project Closeout Checklist		
	Date Completion Verified	Verified By
FINAL CLEANING		
1. All Construction Facilities Removed		
2. All Construction Debris Removed		
3. All Areas Swept/Cleared		
SUBSTANTIAL COMPLETION		
1. All Field Tests Completed and Reports Submitted		
CLOSEOUT PROCEDURES		
1. Written Certification Submitted that Work is Ready for Owner & Engineer Inspector		
2. Inspection by Owner, Engineer, Contractor completed		
3. Punch List of Nonconforming Items Prepared		
4. Documents Required by Governing or Other Authorities Submitted (List Them)		
5. Final Application for Payment Received		
6. Contract Completion and Acceptance Certificate Submittal		
7. Consent of Surety to Final Payment Submittal		
8. Release and Waiver of Liens and Claims Submitted		
9. Affidavit of Payment of Debts and Claims Submitted		
10. Warranties/Guarantees Submitted		
11. Other Required Releases and Waivers Submitted (List Them)		
12. Permits Submitted (List Them)		
13. Weekly Payrolls Submitted as Required by Law		
FINAL COMPLETION		
1. All Items in Punch List Completed		
2. All Other Required Documentation Submitted (List It)		

Project Closeout Checklist						
	Date Completion Verified	Verified By				
CORRECTION/WARRANTY PERIOD						
1. Correction Period Start Date: _____ End Date: _____						
2. Specific Warranties Provided						
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black; width: 60%;"><u>Item</u></th> <th style="text-align: left; border-bottom: 1px solid black; width: 40%;"><u>Warranty Duration</u></th> </tr> </thead> <tbody> <tr> <td style="height: 150px;"> </td> <td> </td> </tr> </tbody> </table>	<u>Item</u>	<u>Warranty Duration</u>				
<u>Item</u>	<u>Warranty Duration</u>					

Full name of persons signing their initials on this checklist:

END OF SECTION

**SECTION 02 41 13.36
UTILITY ABANDONMENT**

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. This Section covers the abandonment, demolition/removal, cutting/capping/plugging, termination and discontinuance of existing utilities within the Limit of Work as designated on the Contract Drawings and described herein, including: water and sewer utilities.
- B. The locations of existing underground services and utilities shown on the Contract Drawings are based on available records. It is not warranted that all existing utilities and services are shown, or that shown locations are correct. The Contractor shall be responsible for determining the location of existing utilities and having the utility companies locate their respective utilities on the ground prior to excavating. The Contractor shall hire a private utility locator to mark out utility locations on-site. The Contractor shall coordinate utility termination work with the applicable utility companies to ensure services have been shutoff.
- C. Up to 200 cubic yards of test pits for the purpose of locating underground pipelines or structures in advance of demolition work shall be excavated and backfilled by the Contractor as required by the Engineer. Test pits shall be backfilled immediately after their purpose has been satisfied and the surface restored and maintained in a manner satisfactory to the Engineer. The Contractor shall test pit as part of this Project for the purpose of locating underground pipelines and structures at no additional cost to the Owner.
- D. Contractor shall TV inspect the building sewer service to determine connection to the main. Reference Section 33 01 30.16 – TELEVISION INSPECTION OF PIPES for additional details.
- E. Except where specifically noted otherwise, the Contractor shall protect the existing stormwater culvert indicated on the Contract Documents, active water mains, active sewer utilities, and remaining utilities not designated for removal.
- F. The Contractor shall furnish all materials, tools, labor, and equipment to abandon, cut/cap/plug, terminate, and discontinue existing utilities as specified herein.
- G. As part of project closeout, The Contractor shall provide an As-Built drawings with all utility termination locations shown with GPS coordinates.

1.02 SUBMITTALS:

- A. The Contractor shall submit a Utility Abandonment Plan to the Engineer within 14 days of the Notice to Proceed. The Utility Abandonment Plan shall include, but not limited to the following: material specifications and shop drawings for all materials and equipment for abandoning existing utilities under this Section and the Contract Drawings; details/plan for protecting utilities to be left in place and details/plan for cutting, capping, abandoning, demolishing, and removing utilities.
- B. Submit to the Engineer an As-Built Documents showing locations of all utility cuts/caps/abandonment/demolition locations with Global Positioning System (GPS) coordinates. The Contractor shall also indicate vertical location based on depth from existing grade. The As-Built Documents will serve as Owner's record of utility termination locations. Utility

terminations to be shown with GPS coordinates on the as-built documents include all cut and capped utility services.

PART 2 - PRODUCTS

2.01 CAPPING MATERIALS:

- A. Cast Iron/Ductile Iron Piping - Caps shall be ductile iron and mechanical jointed with individually actuated wedges of same diameter of pipe. Caps are to be "Megalug" as manufactured by EBAA Iron Sales, Inc. or approved equal. Provide concrete thrust blocks.
- B. Sanitary Sewer/Concrete Utility Duct Banks – Concrete or masonry plugs shall be used.
- C. Copper, Iron Piping – Caps or plugs shall be permanent screwed or silver soldered cap fittings. Termination materials shall be of the same materials as the pipe.

PART 3 - EXECUTION

3.01 GENERAL:

- A. The Contractor shall determine the location of existing utilities to be abandoned from the Contract Drawings, field investigations, electronic utility detectors, coordination with applicable utility companies, and test pits.
- B. The Contractor shall at least 72 hours, exclusive of Saturdays, Sundays, and holidays, prior to excavation contact DigSafe at 811 before working below ground and shall maintain the DigSafe numbers throughout the course of the project.
- C. The Contractor may not begin excavations until approval of the Utility Abandonment Plan. Before backfilling any underground utility termination, the Contractor shall notify the Engineer so the Engineer can inspect and photograph the termination. If the area is covered prior to inspection/approval the work shall be uncovered for inspection at the Contractor's expense. Any and all costs associated with uncovering the work and damages resulting from such uncovering are the sole responsibility of the Contractor. Immediately following the Engineer's inspection/approval, excavations for utility cutting/capping/abandonment shall be backfilled and the surface restored and maintained in a manner satisfactory to the Engineer.
- D. The Contractor shall abandon, demolish/remove, cut/cap/plug, terminate, and discontinue individual utility services as designated on the Contract Drawings and described in these Specifications.
- E. All utility shut offs shall be coordinated with the applicable utility company. The Contractor shall be responsible for any fees associated with the shut off of utilities. The Contractor shall obtain written authorization from the utility companies before shutting off or terminating any utility service, including terminating water and sewer service.
- F. The Contractor shall not remove underground piping except as necessary to terminate utilities or otherwise noted on the Contract Drawings.
- G. The Contractor shall be responsible for employing proper protection techniques for all excavations.

3.02 UTILITY ABANDONMENT:

A. Water Services:

1. The existing water services on the properties shall be disconnected at the main, the corporation shall be turned off, and the remaining service line capped per the Town of Jaffrey's Water Division requirements, as indicated on the Contract Drawings. Sections of the water services that are not removed shall have open ends plugged with ductile iron mechanical jointed caps to prevent the entrance of soil into the pipe after backfilling.
2. The Contractor shall patch any pavement damaged or removed during demolition/capping operations. The Contractor shall repair all damaged pavement and concrete sidewalk that is not designated to be removed on the Contract Drawings per the Town of Jaffrey standard specifications and to the satisfaction of the Owner at no additional cost.

B. Sewer Services:

1. The Contractor shall coordinate with the Town of Jaffrey Water Division to locate the sewer service connection to the main. Contractor shall hire a private utility locator service to use camera inspections of the manholes on site to determine the sewer service connections. Reference Section 33 01 30.16 – TELEVISION INSPECTION OF PIPES for additional details.
2. The existing sewer mains on the property shall be cut and capped per the Town of Jaffrey's Water Division requirements, as indicated on the Contract Drawings. Sections of the sewer main that are not removed shall have open ends plugged to prevent the entrance of soil into the pipe after backfilling.
3. The Contractor shall patch any pavement damaged or removed during demolition/capping operations. The Contractor shall repair all damaged pavement and concrete sidewalk that is not designated to be removed on the Contract Drawings per the Town of Jaffrey standard specifications and to the satisfaction of the Owner at no additional cost.

END OF SECTION

**SECTION 02 41 16
DEMOLITION**

PART 1 - GENERAL

1.01 DESCRIPTION:

A. This Section specifies the demolition of the Former W.W. Cross Property located at 39 Webster Street in Jaffrey, New Hampshire. This demolition work is located within the Contract Limits of Work as shown on the Contract Drawings. The extent of building demolition work includes the removal and proper disposal of the aboveground structures, ancillary site features such as the aboveground storage tank and its enclosure, transformers and pad, and specified utilities in their entirety, unless otherwise specified. Removal of the primary building foundation or footings is not included in this contract. The Contractor shall verify the construction and condition information of the building as well as the information presented in these Contract Documents, by site inspection, and shall provide all resources to perform the building demolition work.

B. Extent of Physical Building Demolition

1. The primary building of the former W.W. Cross property consists of a one story mixed-use warehouse and office space with a footprint of approximately 116,000 square feet. Approximately 42,000 square feet of the building has previously been abated and demolished due to a fire that damaged a portion of the building. The building is abutted by asphalt roads and parking lots to its south and west, a tack pile landfill that slopes towards detention ponds to its east, and a railroad right-of-way to its north. Residential buildings are present less than 150 feet to the buildings south on Webster St. A children's day care is located 200 feet away from the building on Webster St. A stream that is fed by the drainage infrastructure at the site is located less than 100 feet south of the building. The main above grade features of the site include the main building, an aboveground storage tank within an enclosure building, a transformer pad with 3 transformers, and paved parking areas and roads.
2. Contractor shall perform abatement of hazardous building materials in accordance with specification Section 02 81 00.13 – Removal of Universal and Hazardous Waste from Buildings and Section 02 82 33 – Asbestos Abatement. The Contractor shall sequence abatement activities prior to the demolition of a building or structure area. Any comingling or contamination of non-impacted demolition materials with asbestos or hazardous wastes caused by the Contractor shall be properly disposed of at no additional cost to the Owner.
3. The building shall be removed down to its concrete floor slab as indicated on the Contract Drawings. No foundation, footing, or sub-grade structure shall be removed as part of this contract. Utility services to the building shall be disconnected/terminated/abandoned/removed as indicated on Contract Drawings. Live utility feeds to the building must be terminated in accordance with the utility owner. Prior to demolition of the building, the Contractor shall verify that all existing utilities have been disconnected at each building. The Contractor shall be responsible for coordinating with the Town of Jaffrey Utility Department to confirm utility disconnection locations and requirements. See specification Section 02 41 13.36 – Utility Abandonment for additional details.
4. The Contractor shall protect adjacent properties from damage and undermining during demolition activities by means and methods acceptable to the Owner and Engineer.
5. As part of building demolition, the Contractor shall remove and dispose of properly all furnishings, fixtures, equipment, drums, mechanical aspects, and any and all other

structural and non-structural improvements and aspects. Contractor should assume that furnishings of value that may have been observed by him/her during the pre-bid site inspection will become his/her property and shall be removed and properly disposed of by the Contractor, unless specifically identified to the contrary in these Contract Documents or as required by the Engineer. All materials, shall be removed, reused and/or transported to appropriate recycling or disposal facilities.

6. The Contractor shall remove and dispose of the 20,000-gallon aboveground storage tank (AST) and its enclosure building on the western side of the building. Contractor shall cap fill and return piping to prevent residual materials from entering soil. Underground piping shall be left in place, and removal will occur as part of a subsequent remediation phase. The Contractor shall be responsible for obtaining all applicable permits, applications, and notifications related to the work specified herein. The Contractor shall be responsible for coordinating all inspections related to this work, such as with the Jaffrey Fire Department.

C. Demolition Outside the Building Footprint

1. The Contractor shall clear shrubs and trees within 10 feet of the building or as required to complete the work of this Contract. Protect trees to remain as indicated on the Contract Drawings.
2. Remove and dispose of all interior fencing, poles, masonry, debris, site appurtenances, and improvements unless otherwise noted herein or required by the Engineer. Exterior features such as concrete staircases and ramps are to remain. The Contractor shall visually inspect the site outside of the building's footprints for verification and completeness of site appurtenances, improvements, amenities that are to be removed and disposed.
3. All paved surfaces shall remain in place unless their removal is otherwise required for the work under this Contract.
4. With the exception of trees and other site features to remain such as the paving and concrete pads as indicated on the Contract Drawings, all other above-grade and at-grade manmade improvements, including flagpoles, signs, pavers, planters, bollards, equipment, and similar, shall be removed in their entirety. The transformer pad and AST enclosure foundation are to remain. All remaining subgrade foundations shall be brush cleaned prior to project completion.

1.02 REGULATORY REQUIREMENTS:

- A. Conform to applicable codes and requirements for demolition of structures, safety of adjacent structures, dust control, service utilities, and discovered hazards.
- B. Recycle or dispose of all demolition debris in accordance with all applicable regulations.
- C. Contractor shall be aware that existing structures are painted with lead paint. Hence, demolition of the structures shall comply with all applicable lead paint regulations. Contractor performing this work shall be thoroughly knowledgeable of all federal, state and local laws, rules, and regulations regarding materials containing or coated with lead or lead products. By bidding this Contract, the Contractor is stating his/her expertise in this work and the Owner shall not be responsible for any additional costs incurred by the Contractor as a result of any misunderstanding or disagreement with the applicable Federal, State, and Local laws, rules, and codes. Refer to Section 02 80 00.13-Removal of Universal and Hazardous Waste from Buildings for additional information.

- D. Contractor shall perform abatement of hazardous building materials in accordance with specification Section 02 80 00.13 – Removal of Universal and Hazardous Waste from Buildings and Section 02 82 33 – Asbestos Abatement.
- E. Collection, treatment, and disposal of all lead-containing wastes shall be in strict accordance with current applicable Federal, State, and Local laws, rules, and codes, including, but not limited to, Resource Conservation and Recovery Act (RCRA), Toxic Substances Control Act (TSCA), Occupational Safety and Health Act (OSHA), and USEPA.

1.03 DESCRIPTION OF BUILDING

The following is a general description of the primary building to be demolished. The description is not complete and is provided only for the assistance of the Contractor. Details regarding the structure size and construction are not guaranteed to be correct and the Contractor shall not be able to make a claim based on their correctness. The Contractor shall visually inspect for verification, quantification, and completeness of the building's structural and non-structural systems to be demolished and removed, as well as the building's contents for removal and disposal.

The building description and assessments presented herein are intended to provide an understanding of the construction of the school building. Building construction and dimensions vary and the Contractor shall field verify building construction and dimensions. Aboveground structures and ancillary site features such as the AST enclosure shall also be demolished. See Contract Drawings for additional details.

W.W. Cross Primary Building

Footprint:

Approximately 116,000 square feet
42,000 square feet previously demolished to slab
74,000 square feet of aboveground structure remains

Description:

The building is a former mixed-use office and manufacturing space originally built in the 1920s. The building underwent several expansions from the 1930s to the 1970s. Its primary structure is steel framed with exterior concrete block walls, although some sections are wood framed. The building sits on a concrete slab-on-grade foundation. The building features multiple flat roof systems that include several "saw tooth" skylights that illuminate portion of the former manufacturing areas.

General Construction:

Contractor shall field verify all building materials. The information below is typically encountered and provided for the convenience of the Contractor only.

Foundation:

Reinforced concrete slab-on-grade

Building Framing:

Steel and wood framing

Flooring:

Concrete slab-on-grade

Interior Walls:

Steel framed walls with plaster/gypsum wallboard

Exterior Walls:

Exterior concrete block walls

Roof:

Flat with several saw tooth skylights

1.04 RELATED WORK:

Due to the nature of the work described in this Section, the Contractor shall examine the Contract Documents thoroughly for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to, those listed below.

- A. Section 01 11 00 – CONTROL AND WORK OF MATERIALS
- B. Section 01 12 16 – SCOPE AND SEQUENCE OF WORK
- C. Section 01 35 19 – HEALTH AND SAFETY PLAN
- D. Section 01 14 19.16 – DUST CONTROL
- E. Section 01 55 26.13 – SIGNAGE (TRAFFIC CONTROL)
- F. Section 01 57 19 – ENVIRONMENTAL PROTECTION
- G. Section 02 41 13.36 – UTILITY ABANDONMENT
- H. Section 02 82 33 – ASBESTOS ABATEMENT

1.05 SUBMITTALS:

- A. Permits and Certificates: Submit permits and certificates to the Engineer prior to start of demolition work. Items to be submitted include but are not limited to the following:
 - 1. Permits and notices authorizing building demolition including a demolition permit from the Town of Jaffrey.
 - 2. Certificates of severance of utility services.
- B. Lead Compliance Plan: Prior to the start of demolition work, and no later than 15 calendar days after the date of the Notice to Proceed, submit a site-specific Lead Compliance Plan in accordance with OSHA Lead in Construction Standard 1926.62 that identifies all lead hazards and proper work procedures for the work of this section, and includes the required items listed below. This plan shall remain on file at the project site and be updated throughout the work as conditions warrant.
 - 1. Employer's Hazard Communication Program, Worker "Right-to-Know", as identified by OSHA 1910.1200 HAZCOM.
 - 2. Respiratory Protection Program including proper medical monitoring and respiratory protection program requirements.
 - 3. Written description and acceptance, of all proposed procedures, methods, or equipment to be utilized. In all instances, Contractor must comply with all applicable Federal, State and Local regulations.
 - 4. Proposed worker training and orientation plan which at a minimum includes a description of hazards and remediation methodologies, a review of worker protection requirements, proposed decontamination procedures, and location of wash stations and change areas.
 - 5. The name and address of personal air monitoring laboratory(s) performing testing required by these Specifications and applicable regulations.

- C. Demolition Plan: Prior to the start of demolition work, and no later than 7 calendar days after the date of the Notice to Proceed, submit a comprehensive Demolition Plan for the Engineer's review and approval prior to demolition work. The Demolition Plan shall be coordinated with, and as appropriate include reference to, the various plans and submittals required by these Specifications. At a minimum the Contractor's Demolition Plan shall specifically include and address the following.
1. A schedule that details the sequence of demolition following and maintaining the project completion deadlines provided in Section 01 12 16 – SCOPE AND SEQUENCE OF WORK.
 2. Methods, equipment and operations. Include information such as catchment system protection details and procedures, equipment types and placement, name and address of all demolition debris transporters, and protection controls, including protection to traffic, passersby, and abutting parcels.
 3. Coordination for shut-off, capping, and continuation of utility services as required.
 4. A site plan indicating Contractor's intended plan and identifying location for various aspects such as temporary demolition staging and stockpiling areas, debris storage areas, dumpster locations, truck loading areas, equipment and material storage, temporary sanitary facilities, employee parking and similar information.
 5. Indicate the types of wastes to be generated and the proposed disposal or recycling locations. Include back-up disposal and recycling facilities. In accordance with the EPA's Principles for Greener Cleanups, the Contractor is encouraged to clean and salvage/reuse/recycle demolition debris and building contents as much as possible.
 7. Contractor shall identify and make arrangements with all off-site reuse, recycling, and disposal facilities to be used. The Contractor shall not remove any materials from the site until his/her Demolition Plan has been approved by the Engineer. The Contractor shall not remove any demolition material to any off-site facility or location not listed in his/her approved Demolition Plan. If, following approval of the Demolition Plan, the Contractor desires or identifies a need to use any facility not included in the Plan, he must submit all the information as required by this paragraph, and receive approval for same, prior to such use. The Demolition Plan shall, at a minimum, contain the following:
 - Recycling/Disposal facility name(s).
 - Recycling/Disposal facility address(es).
 - Name and title of contact person for each recycling/disposal facility to be used.
 - Telephone number of contact person for each recycling/disposal facility to be used.
 - For each recycling/disposal facility to be used, copies of licenses or permits to operate and confirmation that they are permitted to accept demolition materials to be taken to that facility.
 - Lists matching each facility with the materials it will accept for this project, and specifying whether the facility is a treatment, storage, recycling, or disposal facility.
 - Confirmation from the facility(ies) that they will accept the type and quantities demolition materials.

- Description of Contractor's procedures to manage and track materials and example of Contractor's material tracking log.
- D. Submit to the Engineer a copy of any sampling analyses within 2 days of receipt of the laboratory reports for the sampling. All Contractor-proposed sampling shall be requested in writing and performed only if approved by both the Owner and the Engineer. The Contractor shall not collect and analyze Owner-property samples without prior written permission. Analytical data shall be kept confidential, distributed only to the Engineer and Owner.
- E. Disposal Receipts: Prior to submission of a periodic invoice for payment for Work including materials disposal, and within 21 days of transportation from the site, the Contractor shall document actual disposal of the waste at the designated solid waste receiving facility by completing an associated Disposal Certificate and submitting the original to the Engineer together with all associated disposal receipts from the solid waste facility or the recycling site. Such certificates and receipts shall bear the printed name of the facility operator and shall specify the date of delivery; the quantity and type of material delivered and shall be signed by an on-site representative of the facility operator. Payment may be withheld at the discretion of the Engineer for the disposal of materials for which there are no signed disposal receipts.

1.06 JOB SITE CONDITIONS:

- A. The Contractor shall become thoroughly familiar with the site and of existing utilities and their connections, and within 15 calendar days of the Notice to Proceed for this demolition Contract, note all conditions that may influence the work of this Section.
- B. The Contractor shall coordinate the location and use of a temporary water service for demolition activities and fire protection with the Owner and the Town of Jaffrey and shall provide required backflow preventer(s) and meters as required at no additional cost to the Owner. Contractor shall provide a temporary fire service throughout the duration of the demolition activities acceptable to all local authorities having jurisdiction.

1.07 PROTECTION AND CONTROLS:

- A. The Contractor shall keep in service existing utilities that are not being discontinued by the work of this Contract and shall protect them against damage during demolition operations. Do not interrupt existing utilities servicing occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Perform all work in compliance with 29 CFR 1910.333 and 29 CFR 1926.955. Coordinate with the requirements of Section 01 11 00 – CONTROL OF WORK AND MATERIALS.
- B. Contractor shall arrange and pay for disconnecting, removing, capping, and plugging utility services as required in the Contract Drawings. Place markers to indicate location of disconnected services and survey such locations for inclusion on the As-Built Record Drawings.
- C. The Contractor shall maintain a 6-foot chain link fence with mesh fabric/wind screen throughout the project duration. Fence alignment is shown on the Drawings and is approximate. The Contractor may adjust alignment as necessary to complete the work of the project while adequately securing the work area. See specification Section 01 56 26 – TEMPORARY CHAIN LINK FENCE for additional information.
- D. The Contractor shall install temporary erosion/sedimentation control measures as indicated and in accordance with specification Section 01 57 19 – ENVIRONMENTAL PROTECTION. Contractor shall protect catch basins with compost filter tubes and sediment control sacks.

- E. Contractor shall perform his/her operations in such a manner, including any necessary support of excavation and dewatering as specified in the Contract Documents, as to prevent movement or settlement of adjacent structures, or movement, settlement, or collapse of adjacent services and sidewalks. Cease operations and notify the Engineer immediately if safety of adjacent structures or services appear to be endangered. Do not resume operations until safety is restored. Contractor shall be solely responsible and liable for any such movement, settlement, damage, or injury due to his/her operations. Promptly repair damage at no cost to the Owner. Coordinate with the requirements of Section 01 11 00 – CONTROL OF WORK AND MATERIALS.
- F. Contractor shall ensure safe passage of persons around areas of demolition. Provide, erect, and maintain steel boarding, sidewalk shed, barricades, lighting, and guardrails as required to protect the general public, workers, and adjoining property. Coordinate with the requirements of Section 01 55 26.13 – SIGNAGE (TRAFFIC CONTROL).
- G. Fall protection shall be provided whenever the work is at heights greater than six feet, and or where holes and openings exceed six feet in depth. Contractor shall provide barriers at floor openings and demolished stairways and vertical shafts and maintain same at all times that a potential fall hazard to workers may exist. The design and use of personal fall arrest and restraint systems, and training of personnel shall comply with ANSI standards. Safety harnesses shall be required for all fall arrest systems. Safe access shall be maintained at all times by the use of scaffold ladders, stair towers, or other acceptable means. Platform planks shall be used in lieu of the commonly used single plank during erection and dismantling.
- H. Comply with governing regulations pertaining to environmental protection. Coordinate with the requirements of Section 01 57 19 - ENVIRONMENTAL PROTECTION.
- I. Conduct demolition operations to prevent migration of dust, dirt, and debris to adjacent structures and improvements. Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering into the air. All trucks must be covered when transporting debris from the work site. All vehicles leaving the job site must be cleaned to avoid distribution of dust and dirt to the surrounding areas. Coordinate with the requirements of Section 01 14 19.25 – DUST CONTROL.

PART 2 – PRODUCTS

Not Used

PART 3 - EXECUTION

3.01 DEMOLITION:

- A. Demolition shall be by mechanical methods unless otherwise approved. No blasting shall be permitted without prior approval from the Engineer.
- B. Remove and properly dispose off-site of all above-ground building structures unless otherwise specified.
- C. Properly remove and dispose of all OHM material items, asbestos-containing material, and any lead-based coatings removal necessary to perform demolition work, as applicable, prior to any physical building demolition, in accordance with the requirements of other sections of these specifications. Any critical structural supports that are lead coated shall be removed and disposed only after a reviewed temporary support system is provided in its place.

3.02 DEMOLITION MATERIAL HANDLING AND REMOVAL:

- A. Asbestos-containing building materials abated shall be disposed of as asbestos waste in accordance with Section 02 82 33 – Asbestos Abatement.
- B. Non-asbestos-impacted demolition debris generated by the demolition activities shall be sorted, and to the extent practical, shall be recycled. The Contractor shall transport as much of the metal, wood, clean/uncoated concrete/brick/asphalt (ABC) and rubble as possible to a licensed recycling facility that will recycle such material. General demolition debris that is not separated on-site for recycling shall be disposed of at appropriate licensed construction and demolition (C&D) waste processing facility.
- C. All material removed from the site shall be transported from the site by licensed haulers, via designated truck routes, using appropriate vehicles, containment, and documentation. No material shall leave the site without an associated tracking document; the form of such tracking documents shall be acceptable to the Engineer. Where the means of tracking does not have a preprinted unique alphanumeric identifier, Contractor shall assign and record a tracking number for the document prior to transport of the material from the site.
- D. Contractor shall maintain a Material Tracking Log that documents and tracks all material removed from the site. For each load of material removed from the site under any Section of these Specifications, whether transported to a recycle, reuse, or disposal facility, the Contractor shall record at a minimum the following information:
 - 1. Nature and description of material
 - 2. Business name of licensed hauler
 - 3. Vehicle identifier
 - 4. Weight or quantity of material in hauler's load
 - 5. Type of tracking document and associated document's unique alphanumeric identifier for bill of lading, manifest, or other record being used to track hauler's load
 - 6. Date of transport from the site
 - 7. Date of arrival at the receiving facility
 - 8. Unique number or identifier of associated receiving facility weight slip or receipt.
- E. The Material Tracking Log shall be updated no less than daily and shall be available to the Engineer for review at all times during normal work hours. A copy of the complete Material Tracking Log shall be submitted to the Engineer prior to Final Completion.

3.03 SURROUNDING BUILDINGS

- A. During demolition activities, the Contractor shall be responsible for preventing impacts to surrounding buildings and structures. The Contractor shall also be responsible for controlling excessive vibrations that may disrupt activities in nearby homes and may cause damage to nearby structures.

3.04 ABOVEGRADE STORAGE TANK

- A. Contractor shall pump residual contents of the tank into appropriate containers for off-site disposal or recycling. Remove all fluids and sludges, leaving the tanks ready for cleaning. Contractor to assume up to 1,000 gallons of residual fuel / sludge remain in the AST. The Contractor may sample the contents of the AST after the NTP is issued to expedite disposal approval.
- B. Remove all contents from fill and discharge lines, and associated appurtenances. Remove all oil/sludge or other tank leakage/spillage material present in the enclosure. Dispose of or recycle the contents of pipelines with the contents removed from the associated tank.

- C. All sludges and fluids not recycled shall be containerized, stabilized, manifested, and transported to an approved incineration or disposal facility.
- D. Prepare the tank for removal and the site for inspection. Coordinate with Jaffrey Fire Department for tank inspection and notify Engineer of the schedule. Following the inspection, and upon authorization by the Engineer, remove the AST, all associated aboveground piping and appurtenances.
- E. The removal of the AST shall be conducted by the Contractor in accordance with the requirements and procedures outlined in applicable Federal, State, and local regulations.
- F. After the tank has been removed from the vault, gases shall be purged from the tank and the tank shall be tested for flammable vapors in accordance with all applicable regulations.
- G. Steam clean the AST, associated aboveground piping, and appurtenances for shipment as a non-hazardous waste. Wash water contaminated with petroleum shall be contained and pumped into a vacuum truck for off-Site disposal or recycling.
- H. Prior to removal from the site for transport to the licensed tank disposal facility, the tank shall be rendered dysfunctional by punching holes in the tank sidewalls and end walls.
- I. Contractor shall cap fill and return piping to prevent residual materials from entering soil.
- J. In the event there is visible petroleum product remaining in an excavation, the Contractor shall immediately remove it by vacuum, or by other approved method.

END OF SECTION

**SECTION 02 80 00.13
REMOVAL OF UNIVERSAL AND HAZARDOUS WASTE FROM BUILDINGS**

PART 1 - GENERAL

1.01 GENERAL PROVISIONS:

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all sections within DIVISION 1-GENERAL REQUIREMENTS, which are hereby made part of this Section of the Specifications.
- B. Equality of material, article, assembly or system other than those named or described in this Section shall be determined in accordance with applicable provisions of the GENERAL CONDITIONS.
- C. Examine all conditions as they exist at the project before submitting a bid for the work of this Section.
- D. All provisions of this Section relating to the health and safety of workers and the general public, as well as protection of the environment are minimum standards. The Contractor is responsible for determining whether any legal requirements or prudent conservative work practices require any additional and/or more stringent protective measures, and implementing such measures if deemed necessary. Nothing in this Section shall be deemed to relieve the Contractor from any liability with respect to any such legal requirements or requirement of prudent conservative practice.
- E. All work-site preparations and practices will be conducted in accordance with all Federal, Massachusetts and appropriate Town of Jaffrey and other local regulations, standards and codes pertaining to worker health protection, protection of the public health and the environment, including current US Environmental Protection Agency (EPA), Department of Labor Occupational Safety and Health Administration (OSHA), US Department of Transportation (DOT), New Hampshire Department of Environmental Services (NHDES), local and all other Federal, New Hampshire, and local regulations pertaining to removal, transportation and disposal.

1.02 SCOPE OF WORK – GENERAL:

- A. PCB- and/or di (2-ethylhexyl) phthalate (DEHP)-Containing Light Ballasts
 - 1. Remove, package, transport and dispose/recycle all PCB- and DEHP-containing light ballasts as universal/hazardous waste.
 - 2. Provide and secure all notifications and permits necessary for the transport and disposal of PCB- and DEHP-containing light ballasts as hazardous material.
 - 3. Furnish all labor, materials, equipment, and services required for all work included in this Section.
 - 4. Compliance with all applicable federal, state, and local regulations, as well as all requirements set forth in these Specifications and facility requirements.
 - 5. Decontamination and clean up following removal activities in each designated work area.
 - 6. Perform any other work or activities required by this Specification, applicable regulations, or as necessary to perform a complete job to the satisfaction of the Owner and Engineer.

7. Provide temporary electrical wiring and services as required for removal and disposal of PCB- and DEHP-containing light ballast.

B. Fluorescent Light Bulbs & Mercury-Containing Thermostats/Switches

1. Remove, package, transport and dispose of all mercury/lead-containing fluorescent lamp bulbs and thermostats/switches from Site buildings as hazardous waste. Contractor shall ensure that bulbs are handled carefully and not broken or damaged.
2. Provide and secure all notifications and permits necessary for the transport and disposal of mercury/lead-containing bulbs as hazardous material.
3. Furnish all labor, materials, equipment, and services required for all work included in this Section.
4. Comply with all applicable federal, state, and local regulations, as well as all requirements set forth in these Specifications and facility requirements.
5. Decontamination and clean up following removal activities in each designated work area.
6. Perform any other work or activities required by this Specification, applicable regulations, or as necessary to perform a complete job to the satisfaction of the Owner and Engineer.
7. Provide temporary electrical wiring and services as required for removal and disposal of mercury/lead-containing bulbs.

C. Refrigerants

1. Collect and analyze refrigerant samples, as necessary, to identify system gases from all refrigerant-containing vessels and systems. These systems include wall-mounted air conditioning units.
2. Evacuate all refrigerant-containing vessels and systems using a vacuum pump. Furnish and install all necessary generators, valves, and fittings required to capture and collect the refrigerants in DOT-approved recovery cylinders, tanks or drums. Properly label all recovery cylinders, tanks and drums.
3. All activities associated with the removal and reclamation of refrigerant gases shall be in accordance with Section 608 of the Federal Clean Air Acts Amendment of 1991.
4. After removal of all refrigerants; units/systems shall be disposed of in accordance with applicable regulations. Certificates of reclamation/recycling shall be submitted to the Owner and Engineer.

1.03 SCOPE OF WORK – DETAILED:

An estimated listing of the Universal and Hazardous Wastes to be removed from the Site building in accordance with this Section is provided in the following table. The Contractor shall field verify, and is responsible for the removal of all Universal and Hazardous Wastes in both buildings as part of this Contract.

Materials	Quantity
Fluorescent light ballasts	750
Fluorescent light tubes	1,700
Thermostat switches	20
Batteries/emergency lights	30
Refrigerators/freezers/compressors	5
Window mount AC units	2
Cathode-ray tubes (televisions)	20
55-gallon drums (unknown contents)	15

* Hazardous wastes were counted as part of the *Hazardous Building Materials Inventory* conducted by Ransom in 2017. This survey was conducted prior to the destruction of a portion of the building. Actual quantity of hazardous waste remaining in the building may vary.

- A. PCB- and DEHP-Containing Light Ballasts Removal and Disposal: Suspect PCB- and DEHP-containing light ballasts are present throughout the facility based upon dismantling of representative fixtures to observe ballasts. The following work shall be included as the scope of work for removal, transport and disposal/recycling of PCB- and DEHP-containing light ballasts:
1. All hazardous material abatement work areas shall remain isolated from all other trades and remain inaccessible to the public. Contractor shall monitor access to these areas.
 2. Contractor shall remove and dispose of all PCB- and DEHP-containing light ballasts in the facility as PCB- and DEHP-containing waste in accordance with all applicable state and federal regulation. Removal and disposal of all light ballasts shall include proper packaging, transportation and disposal of waste. Contractor is required to provide and secure all notifications and permits necessary for the transportation and disposal of PCB- and DEHP-containing light ballasts as hazardous material. The disposal options may include recycling, Subtitle-C and disposal at a chemical or hazardous waste landfill, or incineration at an EPA-approved high temperature incinerator. Under no circumstances shall the Contractor be allowed to dispose of light ballasts (i.e. intact ballasts) at a municipal solid waste landfill. Contractor is advised that all leaking PCB-or DEHP-containing ballasts must be incinerated at an EPA-approved high temperature incinerator at its costs.
 3. If the Contractor elects to recycle PCB- and DEHP-containing light ballasts, the Contractor is required to provide certificates of recycling for specific light ballast components that can be reclaimed (i.e. metals including copper or steel) and hazardous waste manifests for the PCB- and DEHP-containing components of the light ballasts (i.e. capacitors and possibly asphalt potting material surrounding the capacitor).
 4. Contractor shall provide hazardous waste manifests documenting the proper disposal of all PCB- and DEHP-containing light ballasts in accordance with all applicable state and federal regulations.
 5. Contractor shall specify the method of disposal to the Owner and Engineer and provide any information and/or documentation requested by the aforementioned parties to prove that all PCB-containing light ballasts have been properly packaged, labeled, transported and disposed.

- B. Fluorescent Light/Mercury-Containing Vapor Lamp Bulbs Removal and Disposal: The following work shall be included as the scope of work for removal of fluorescent light bulbs:
1. All hazardous materials abatement work areas shall remain isolated from all other trades and remain inaccessible to the public. Contractor shall monitor access to these areas.
 2. Contractor shall remove all fluorescent light bulbs and/or mercury-containing vapor lamps, intact, prior to demolition activities, and to dispose of all light bulbs as mercury or lead waste in accordance with all applicable state and federal regulations. Removal and disposal of all light bulbs shall include proper packaging, transportation and disposal of waste. Contractor is required to provide and secure all notifications and permits necessary for the transportation and disposal of fluorescent light bulbs in accordance with all applicable state and federal regulations. The disposal options may include recycling or land disposal in accordance with all applicable state and federal regulations.
 3. If the Contractor elects to recycle bulbs, the Contractor is required to provide certificates of recycling for specific bulb components that can be reclaimed (i.e., glass, aluminum, etc.) and hazardous waste manifests for the toxic substances present in the bulbs (i.e., mercury, lead).
 4. Contractor shall provide manifests documenting the proper disposal of all bulbs in accordance with all applicable state and federal regulations.
 5. Contractor will be required to specify the method of disposal to the Engineer and provide any information and/or documentation requested by the aforementioned parties to prove that all light bulbs have been properly packaged, labeled, transported and disposed.
- C. Mercury Thermostat/Switch Removal/Disposal: The following work shall be included as the scope of work for removal of mercury thermostats/switches.
1. All hazardous materials abatement work areas shall remain isolated from all other trades and remain inaccessible to the public. Contractor shall monitor access to these areas.
 2. Contractor shall remove all mercury-containing thermostats/switches intact, prior to demolition activities, and to dispose of mercury containing vials in accordance with all applicable state and federal regulations. Removal and disposal of all mercury thermostats/switches shall include proper packaging, transportation and disposal of waste. Contractor is required to provide and secure all notifications and permits necessary for the transportation and disposal of mercury thermostats/switches in accordance with all applicable state and federal regulations. The disposal options may include recycling or land disposal in accordance with all applicable state and federal regulations.
 3. Contractor shall provide manifests documenting the proper disposal of all thermostats/switches in accordance with all applicable state and federal regulations.
 3. Contractor will be required to specify the method of disposal to the Engineer and Consultant and provide any information and/or documentation requested by the aforementioned parties to prove that all thermostats/switches have been properly packaged, labeled, transported and disposed.
- D. Contractor shall sample, as required by the disposal facility, and dispose of the drums per applicable regulations. Contractor shall provide manifests documenting the proper disposal of all drums.

1.04 RELATED WORK SPECIFIED ELSEWHERE:

- A. 02 82 33 – ASBESTOS ABATEMENT
- B. 02 83 19 – LEAD-BASED COATINGS REMOVAL
- C. The work of this section shall be performed as stated herein. In performing the work of this Section, the Contractor shall refer to other Divisions for additional procedures. The Contractor is responsible for the coordination of the work of this section with other related work.
- D. Portions of the work herein require direct coordination with the work of the above noted Related Sections. The General Contractor shall coordinate this with the work of other trades on the site.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

NOT USED

END OF SECTION

**SECTION 02 82 33
ASBESTOS ABATEMENT**

PART 1 GENERAL

1.01 GENERAL PROVISIONS:

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all sections within DIVISION 1-GENERAL REQUIREMENTS, which are hereby made part of this Section of the Specifications.
- B. Equality of material, article, assembly or system other than those named or described in this Section shall be determined in accordance with the provisions of Article VI of the GENERAL CONDITIONS.
- C. Examine all conditions as they exist at the Site related to the project before submitting a bid for the work of this Section.
- D. All provisions of this Section relating to the health and safety of workers and the public, as well as protection of the environment are minimum standards. The Contractor is responsible for determining whether any additional and/or more stringent protective measures are required by any legal requirements or prudent conservative work practices and implementing such measures if deemed necessary. Nothing in this Section shall be deemed to relieve the Contractor from any liability with respect to any such legal requirements or requirement of prudent conservative practice.
- E. Should demolition activities, as performed by the Contractor, uncover materials not readily identified as non-asbestos-containing, the material should be assumed to be asbestos-containing until classified otherwise. Removal should be performed in compliance with all requirements outlined in the New Hampshire statute RSA 141-E Asbestos Management and Control and regulation Env-A 1800 Asbestos Management and Control; NESHAP 40 CFR 61; and OSHA 29 CFR 1926.1101, including all applicable Local ordinances.
- F. All work under this Section shall be performed by a contractor holding a current New Hampshire Department of Environmental Services (DES) asbestos abatement contractor's license. The Contractor shall furnish all labor, worker training, materials, equipment, and services for the complete and proper removal and disposal of asbestos-containing materials, as Specified in Sections 1.02 and 1.03 of this Specification. The Contractor shall be responsible for the preparation and all costs and communications associated with any DES waiver or alternative work practice submitted for the project. Contractor shall be aware of the process and requirements for preparation, submittal and review/revision process of a waiver and/or variance, and shall incorporate into their project schedule. No delay claims will be accepted related to DES review or edit requests.
- G. Site surveys for asbestos-containing materials (ACMs) were performed in support of up-coming demolition of the Site Building. The following ACMs were identified within the Site building: window glazing compound, floor tile and mastics (multiple types), stair tread mastic roofing materials.
- H. For the purpose of this Section, the following definitions apply:
 - "Site" shall refer to the former W.W Cross property located at 39 Webster Street in Jaffrey, New Hampshire.
 - "Contractor" shall refer to the asbestos abatement contractor.
 - "Engineer" shall refer to Weston & Sampson Engineers, Inc.
 - "Owner" shall refer to the Town of Jaffrey.

1.02 DESCRIPTION OF WORK - GENERAL:

A. Provide labor, materials, and equipment to complete the work of this Section, including but not limited to:

1. Removal and disposal of all specified ACM and specified non-ACM materials, as indicated in Section 1.03, in accordance with the provisions set forth in this Section. This shall include the removal and disposal of assumed asbestos-containing: window glazing compound, floor tile and mastics (multiple types), stair tread mastic, roofing materials, ACM debris, other specified ACMs and contaminated debris within the work areas.

All quantities of ACM will be verified by the Contractor, and agreed upon by Engineer and the Owner, before any work area preparations. As such, the Contractor shall visually inspect the Site building prior to bid submission.

2. Work area preparations, including pre-cleaning, installation of critical barriers and polyethylene sheeting, construction of decontamination facilities, work area enclosures, sealing, isolation, and other activities.
3. Decontamination and clean up following removal activities in each designated work area as noted and as required.
4. Performance of any other work or activities required by this Specification, applicable regulations, or as necessary to perform a complete job.
5. Compliance with all applicable Federal, State, and Local regulations, as well as all requirements set forth in these Specifications and facility requirements.
6. In areas where ACMs exist above, below or behind any support structure, door frame, piping, etc. the contractor shall be responsible for removing or working around the obstruction in order to access ACM for removal.
7. The Contractor shall retain a third-party accredited Asbestos Project Monitor to provide project monitoring services, abatement oversight and final air clearance sampling and analysis.
8. The Engineer and Owner reserve the right to perform job site inspections at any time during the project. The Engineer shall perform a final walkthrough of the Site at the conclusion of abatement activities.
9. Contractor shall be responsible for Site security. If a containment or work area becomes vandalized and requires repair the Contractor shall reconstruct the containment or work area at no cost to the Owner.
10. Given the deteriorated condition of the building containing known ACM, the Contractor shall consider bulk load-out of damaged sections of the building as an appropriate means of asbestos abatement. If bulk load-out is performed by the Contractor, it shall be at no additional cost to the Owner.

1.03 DESCRIPTION OF WORK - DETAILED:

- A. The following is the approximate location and quantities of ACMs identified at the Site. ACMs that were removed as part of previous building demolition are not included below.

Material	Location	Approximate Quantity
Window Glazing Compound	Room 17	2 ea
9-in Grey Floor Tile	Room 2 (Bathroom)	900 SF
9-in Tan & Green Floor	Room 4 (Bathroom, Office)	1125 SF
9-in Floor Tile Mastic	Room 22 (Bathroom)	75 SF
9-in Floor Tile Mastic	Room 22 (Bathroom)	600 SF
Residual Mixed Mastics	Office Area	720 SF
Mastic associated with vinyl stair tread	Office Area Entryway	25 SF
Wall Flashing (tars/felts) – multiple layers	Roof Section 1**	170 SF
Penetration Flashing (tars/felts) – multiple layers	Roof Section 1**	50 SF (3 EA)
Perimeter Flashing (tars/felts) – multiple layers	Roof Section 2**	550 SF
Penetration Flashing (tars/felts) – multiple layers	Roof Section 2**	16 SF (1 EA)
Perimeter Flashing (tars/felts) – multiple layers	Roof Section 3**	850 SF
Sawtooth Flashing (tars/felts) – multiple layers	Roof Section 3**	19,000 SF

*Asbestos-containing mastic may be adhered to carpet, tile, flooring, etc. such materials shall be considered to be contaminated by asbestos and handled, removed and disposed of as ACM.

**Roof Section numbers based on attached *Hazardous Building Materials Inventory*, Ransom, 2017

1.04 RELATED WORK:

- A. Related work specified elsewhere: Examine all Drawings and all other Sections of the Specifications for requirements of related sections affecting the work of this Section, including, but not limited to:

1. Section 00 31 43 – Permits
2. Section 01 35 29 – Health and Safety Plan
3. Section 02 41 16 – Demolition

- B. The work of this Section shall be performed as stated herein. In performing the work of this Section, the Contractor shall refer to Division 1 for additional procedures. The Contractor is responsible for the coordination of the work of this section with other related work.

1.05 SEQUENCE OF WORK:

- A. The following is a typical sequence of work that the Contractor shall adhere to during the asbestos abatement project. Engineer may authorize deviations from this typical sequence based upon the specific conditions encountered during the project.

1. Post all required signage.
2. Isolate work area from unauthorized access.
3. Prepare the specified Work Area as described in Part 3 of this Section.

4. Construct decontamination unit, and any other construction needed to complete the work area, as described in this Section.
5. The Contractors' third-party Asbestos Project Monitor shall provide air monitoring at the perimeter of the work area and also shall collect and analyze air samples.
6. Request Engineer to inspect work area preparation and obtain Engineer approval before beginning removal work.
7. Remove and dispose all asbestos-containing materials as required by these Specifications.
8. Decontaminate the work area upon completion of removal.
9. Request the third-party Asbestos Project Monitor to perform a final visual inspection to assure that no visible debris exists in the work area. Contractor shall re-clean the work areas as needed until they pass a visual inspection by the Contractors' third-party Asbestos Project Monitor.
10. Remove all work area barriers, equipment, polyethylene sheeting, etc. and clean any areas as described in this Section.
11. Submit all materials as required at the post abatement removal meeting not more than thirty days after completion of asbestos removal work.

1.06 ESTIMATES:

- A. Section 1.03 represents a brief description of the location of asbestos-containing materials. This data is provided for informational purposes only and is based on the best information available at the time of specification preparation. Nothing in this section may be interpreted as limiting the scope of work otherwise required by this contract and related documents.
- B. The quantities and location of ACM and the extent of work included in this section are only best estimates that are limited by the physical constraints imposed by safety of entering the buildings. Accordingly, minor variations of plus or minus 15% of the estimated quantities of ACM are considered as having no impact on the price of this contract.

1.07 COORDINATION AND PHASING OF WORK:

- A. Contractor shall coordinate all work in this Section with all other work of this Project. Where additional regulatory requirements apply to the work in this Section, the Contractor shall ensure compliance with all requirements.
- B. Contractors work schedule must be coordinated with, and acceptable to the Owner. Contractor shall work continuously and diligently in each work area on the days and during the hours indicated on their work schedule.
- C. Contractor shall cooperate fully with other Contractors and personnel at the facility.
- D. Contractor shall subdivide work areas and/or otherwise provide additional containments and mobilization where and when necessary to accomplish asbestos abatement in accordance with the project phasing, as determined and specified by the Owner.
- E. Contractor shall provide the third-party Asbestos Project Monitor with at least 48-hours of advance notice to schedule any final air clearance sampling or final visual inspections.

1.08 SUBMITTALS:

A. PRE-ABATEMENT MEETING:

The Contractor shall meet with the Owner and the Engineer for a Pre-Abatement meeting before commencing work on the project. At the meeting, the Contractor shall be represented by authorized representatives and the field supervisor who shall run the project on a daily basis, and who shall present evidence that all requirements for initiation of the work have been met. The minimum agenda for the meeting shall be:

1. Review of "Pre-Job Submittals".
2. Channels of communication.
3. Abatement schedule, including sequence of critical work.
4. Designation of responsible personnel.
5. Procedures for safety, security, quality controls, housekeeping, and related matters.
6. Use of premises, facilities, and utilities.

B. PRE-JOB SUBMITTALS:

The Contractor shall provide two copies of the following Pre-Job Submittals at the Pre-abatement Conference:

1. Copies of all notifications, permits, applications, personal licenses and like documents required by Federal, State, or Local regulations obtained or submitted in proper fashion.
2. List of employees to be used on this project. This shall include Chain of Command of responsibility at work Site including supervisors, foreman, and competent person, their names, resumes and certificates of training.
3. Copies of medical records as required by OSHA or a notarized statement by examining medical doctor that such examinations took place and when for each employee to be used on project.
4. Record of successful respiratory fit test performed by a competent person (as defined by OSHA) within the previous 12 months, as required elsewhere in the documents for each employee to be used on this project.
5. Certificate of Insurance. Owner and Engineer shall be listed as additional insured on the certificate.
6. Proposed respiratory program for employees throughout all phases of the job, including make, model and NIOSH approval numbers of respirators to be used.
7. Written description of all procedures, methods, or equipment to be utilized by the Contractor that differ from the Contract Specifications, including manufacturers specifications on any equipment not specified for use by the Contract Specifications.
8. Proposed electrical safeguards to be implemented, including but not limited to location of transformers, GFCI outlets, lighting, etc., necessary to safely perform the job, including a description of an electrical hazards safety plan for common practices in the work area.

9. A list of all equipment to be used on Site, by make and model, including negative pressure equipment, HEPA vacuums, Water Atomizing Devices, etc.
10. List of transporters and disposal facility or facilities permitted to accept asbestos waste.
11. Contractor's testing lab, AIHA PAT proficiency, and Certification in the State where work Site is located.
12. Abatement schedule detailing phasing, including approximate days per phase, for asbestos abatement of all materials.

C. POST-CONSTRUCTION SUBMITTALS:

1. Submittals shall be prepared in accordance with Section 01 33 23 - SUBMITTALS.
2. The Contractor shall submit the following to the Engineer within thirty (30) days after completion of the project:
 - a. Manifests and waste receipts acknowledging disposal of all waste material from the project showing delivery date, quantity, and appropriate signature of landfill's authorized representative.
 - b. A copy of the entry-exit logbook required elsewhere in these Specifications.
 - c. All personnel monitoring results as required by OSHA and elsewhere in these Specifications.
 - d. Copy of licenses, medical, and fit tests of all workers and supervisors who performed work on the project.
 - e. All notifications as required elsewhere in these Specifications.
 - f. Copies of all asbestos related air sampling data including required final air clearance sampling data.

1.09 REFERENCE STANDARDS, REGULATIONS AND CODES:

- A. All work shall be performed strictly according to the Specifications contained herein, any DES-approved Abatement Work Plan, and with the regulations cited in this Article. The Contractor and all sub-contractors undertaking asbestos abatement work and persons in their employ shall comply with and be bound to requirements of the following Federal, State, and Local standards, regulations and codes. These standards and codes shall be by reference made part of this Section and shall be complied with. Whenever regulations are conflicting, the more stringent regulation will prevail.
 1. US Department of Labor; Occupational Safety and Health Act of 1970. (Particular attention is drawn to the Asbestos Regulations: CFR Title 29, Part 1910, Sec. 1910.1001 and Part 1926, Sec. 1926.1101, and the Respirator Regulations; CFR Title 29, Part 1910, Sec. 1910.134 and the Hazard Communication Program, CFR Title 29, Part 1910.1200).
 2. US Environmental Protection Agency, CFR, Title 40, Part 61, Subparts A and M, National Emission Standards for Hazardous Air Pollutants; Asbestos NESHAP Revision; Final Rule, Dated Tuesday, November 20, 1990.

3. US Environmental Protection Agency; TSCA Title II, Asbestos Hazard and Emergency Response Act (AHERA), 40 CFR Part 763 Subpart E - "Asbestos-Containing Materials in Schools" and also 40 CFR, Part 763, Subpart G - "Worker Protection Rule".
4. US Department of Transportation regulations, 49 CFR Parts 172 and 173.
5. All State of New Hampshire laws, regulations and standards, including state statute RSA 141-E Asbestos Management and Control and state regulations Env-A 1800, Asbestos Management and Control.
6. Other Federal, State and Local statutes, ordinances, regulations, or rules pertaining to this Section and the work described herein, including the storage, transportation and disposal of asbestos.

- B. All regulations by these and other governing agencies in their most recent version are applicable. These specifications refer to many requirements found in these references, but in no way, intend to cite or reiterate all provisions therein or elsewhere. It is the Contractor's responsibility to know, understand, and abide by all such regulations and common practices. Other provisions contained in these references may from time to time during the execution of this contract be enforced by the Owner at his/her own discretion.

1.10 REGULATORY SUBMITTALS:

- A. The Contractor shall be responsible for securing all necessary permits for asbestos related work, including hauling, removal, and disposal, fire, and materials usage, or any other permits required to perform the specified work.
- B. The Contractor shall notify the following agencies in appropriate manner and place of impending work, and shall provide evidence of notifications at the pre-construction conference:
 1. U.S. Environmental Protection Agency,
J. F. Kennedy Federal Building
Boston, Massachusetts 02203
(10 working days in advance)
 2. New Hampshire Department of Environmental Services
(10 working days in advance)
Send Notification to:
New Hampshire Department of Environmental Services
Attn: Asbestos Management Program
29 Hazen Drive, PO Box 95
Concord, NH 03302-0095
 3. Town of Jaffrey Fire Department, Building/Planning Department or Inspectional Services Department, Health Department, Department of Public Works, Water Department, Police Department and any other state or town agencies as required by law or ordinance.

1.11 PROJECT CONDITIONS:

- A. Working space and space available for storing materials is restricted within the confines of the project and as shown in the Drawings.
- B. Provide access and personal protective equipment, to the Engineer and the Owner.

- C. Schedule the use of existing utilities with the Owner. No utility service, fire protection system, or communication system may be interrupted without prior approval of the Owner and Engineer.
- D. Water, electric power, lighting and other utilities, toilets, and other facilities shall be provided by the Contractor from existing sources where Contractor's use is not excessive and does not interfere with buildings normal use. Where existing utilities of the development are not adequate or cannot be used, the Contractor is responsible for providing alternative sources. The use of the building's utilities shall be coordinated through the Owner.
- E. Post and affix caution signs and labels as required by OSHA regulation, 29.CFR.1926.1101 (k) (1). Post safety signs outside the work project as may be required by the Owner. Obtain two copies of 29.CFR.1910.1001, 29.CFR.1926.1101, 40.CFR.61, Subpart M, and State of New Hampshire RSA 141-E Asbestos Management and Control and state regulations Env-A 1800, Asbestos Management and Control, and post one copy at the job Site and retain one copy on file.
- F. Post at the job Site, or at the entrance to each independent Work Area, one copy of all Material Safety Data Sheets (MSDS's) of all chemicals and other substances to be used on this contract. These sheets shall be made available to the Engineer for review.
- G. It will be the responsibility of the Contractor to maintain strict security of equipment, containments, work areas, buildings, trenches and excavations during the duration of their activities on the Site.

1.12 GENERAL REQUIREMENTS:

- A. All work-site preparations and practices will be conducted in accordance with all Federal, New Hampshire and appropriate Town and other Local regulations, standards and codes pertaining to worker health protection, protection of the public health and the environment, including current US Environmental Protection Agency (EPA), Department of Labor Occupational Safety and Health Administration (OSHA), US Department of Transportation (DOT), DES, Local and all other Federal, State of New Hampshire and Local regulations pertaining to asbestos removal, its transportation and disposal.
- B. All operations involving exposure to airborne asbestos fiber shall be carried out according to the requirements of Part 3 of this Section.
- C. Prior to use of any design, device, material, method of operation, or process covered by letters patent or copyright, the right for such use shall be secured by suitable legal agreement with the patentee or Owner of the letters patent or copyright. No arrangement involving letters patent or copyright is acceptable, if subsequent payment for permanent use following completion of the work is required or implied.

1.13 QUALITY CONTROL:

- A. The Owner may retain the services of the Engineer to provide project administration, monitoring of Contractor work practices and performance, inspection of the work-sites, bulk fiber identification, and air sampling and analysis throughout the asbestos removal project.

B. AIR MONITORING:

- 1. Background (pre-testing) air and appropriate dust samples may be taken by the Contractors' third-party Asbestos Project Monitor to represent conditions before the Contractor starts masking and sealing operations.
- 2. During removal, area samples may be collected by the Owner or his agent in locations proximate to those areas where removal of asbestos-containing materials is ongoing. Contractor shall be responsible for all OSHA personal sampling. The Contractors' third-

party Asbestos Project Monitor shall collect perimeter air samples during bulk loading, if necessary. Samples shall be collected from all four sides of the work area. A minimum of two samples per location per day shall be collected and analyzed onsite.

3. A Final Visual Inspection of the work area may be conducted by the Owner or his agent to ensure no visible asbestos debris exists in the work area, prior to demobilizing from the work area.
4. If necessary, the air clearance acceptance criteria for this project is <0.010 fibers per cubic centimeter of air (f/cc) by Phase Contrast Microscopy (PCM) using the NIOSH 7400 Method. NOTE: Encapsulation on all surfaces (including floor) must be dry prior to final air sampling.
5. A sufficient number of samples to reliably characterize the work place air quality will be taken. Air will be agitated by means of a small leaf blower prior to the test and kept agitated by means of a small electric fan. The results of all samples must comply with the regulations set forth in this specification. Failure to meet the specified criteria will require the Contractor to re-clean the designated work Site and then the Contractors' third-party Asbestos Project Monitor to repeat the final air clearance testing. All repeat air testing shall be the Contractor's financial responsibility. Cleaning and testing will be repeated until the specified criteria are met.

C. WORK REVIEW:

1. Outside the work area, airborne fiber concentrations must not exceed **0.010 fibers/cc**. If concentrations exceed this level, the work must be stopped, conditions reviewed as to the probable cause, and then corrected.

D. INSPECTIONS:

1. The Engineer may conduct a pre-abatement inspection at their discretion. The Engineer will also conduct periodic inspections during abatement. The Contractors' third-party Asbestos Project Monitor will conduct a final visual inspection.

1.14 PERSONAL PROTECTION:

A. RESPIRATORS AND PROTECTIVE CLOTHING:

1. Personal protection, in the form of disposable Tyvek suits, and NIOSH approved respirators, are required for mechanics, contractor supervision, Engineer and visitors at the work Site during the set-up, removal, and cleaning operations. Contractor shall provide all this protective equipment for workers, Engineer and authorized personnel to access this work Site.
2. Each worker shall be supplied with a minimum of two complete disposable uniforms every day. Removal workers shall not be limited to two uniforms. Supply additional uniforms as is necessary. Under no circumstances will anyone entering the work area be allowed to reuse a contaminated uniform.
3. Work clothes shall consist of disposable full body suits, head covers, gloves, footwear, and eye protection.
4. Supply workers and supervisory personnel with NIOSH approved protective respirators and HEPA/filters (P100 filters). Appropriate respirator selection shall be determined by the daily personnel samples being taken and strictly follow the guidelines set forth in the OSHA respiratory program 29 CFR 1910.134 and New Hampshire statutes and regulations. The respirators shall be sanitized and maintained according to the manufacturer's specifications. Appropriate respirators shall be selected using the information provided in

OSHA Title 29 CFR Part 1910.1926 Final Rules. Disposable respirators shall not be considered acceptable in any circumstance. The Contractor will maintain on Site a sufficient supply of disposable HEPA/filters to allow workers and supervisory personnel to change contaminated filters at least three (3) times daily. The Contractor is solely responsible for means and methods used and for compliance with applicable regulations.

5. Respirators shall be individually assigned to removal workers for their exclusive use. All respiratory protection shall be provided to workers in accordance with the written submitted respiratory protection program, which includes all items in OSHA 29 CFR 1910.134 (b) (1-11). A copy of this program shall be kept at the worksite and shall be posted in the Clean Room of the Decontamination Unit.
6. Workers must perform negative and positive pressure fit tests each time a respirator is put on, whenever the respirator design so permits.
7. Workers shall be given a qualitative fit test in accordance with procedures detailed in the OSHA 29 CFR 1910.134, Qualitative Fit Test Protocols for all respirators to be used on this abatement project. An appropriately administered quantitative fit test may be substituted for the qualitative fit test.
8. Upon leaving the active work area, pre-filters shall be discarded, cartridges removed, and respirators cleaned in disinfectant solution and clean water rinse. Clean respirators shall be stored in plastic bags when not in use. The contractor shall inspect respirators daily for broken, missing, or damaged parts.
9. Provide daily personal sampling to check personal exposure levels for the purpose of establishing respiratory protection needs. Samples shall be taken for the duration of the work shift or for eight hours, whichever is less. Personal samples need not be taken every day after the first day if working conditions remain invariant but must be taken every time there is a change in the removal operation, either in terms of the location or the type of work. Sampling will be to determine eight-hour Time-Weighted-Averages (TWA). The contractor is responsible for personal sampling as outlined in OSHA Standard 1926.1001.
10. Sampling personnel shall be proficient in the taking of air samples under NIOSH 7400, and must be supervised by an individual who has completed the training course NIOSH 572 or equivalent.
11. Air sampling results shall be available at the job Site in written form no more than twenty-four (24) hours after the completion of a sampling cycle. The document shall list each sample's result, sampling time and date, person monitored, flow rate, sample duration, microscope field area, number of fibers per fields counted, cassette size and analysts name and company. Air sample analysis results will be reported in fibers per cubic centimeter.

B. WORK PROCEDURES:

In order to avoid possible exposure to dangerous levels of asbestos, and to prevent possible contamination of areas outside the demarcated work zone, work shall follow the guidelines listed below.

1. Before leaving the work area, the worker shall remove all gross contamination and debris from the coveralls. In practice, this is carried out by one worker assisting another.
2. All equipment used by the workers inside the demarcated work zone shall be either left in the Dirty Room of the Decontamination Unit or thoroughly decontaminated before being removed from the area. Extra work clothing (that in addition to the disposable garment)

shall be left in the Dirty Room of the Decontamination Unit until the completion of work in that area.

3. As stated in Section 3.01(D) (Decontamination Unit and Procedures), all persons leaving the removal area must decontaminate before leaving the demarcated work area.
4. Under no circumstance shall workers or supervisory personnel be allowed to eat, drink, smoke, chew gum, or chew tobacco in the work area. Only in the case of life threatening emergency shall workers or supervisory personnel be allowed to remove their protective respirators while in the work area. In this situation, respirators are to be removed for as short a duration as possible.

1.15 SPECIAL CONSIDERATIONS:

- A. Storage - Limited storage space may be provided by the Owner on the property for this project. Contractor will supply any additional temporary storage as needed. All materials and equipment are to be kept in orderly fashion in designated areas, free and clear of high traffic areas and doorways, and in conformance with all regulations, codes, and in consideration of building usage. Contractor will be allowed to store waste in a waste dumpster on-site, to be coordinated with the Owner.
- B. Working Hours - Working hours are specified in Division 1 - GENERAL REQUIREMENTS.
- C. Security - The Owner will provide specific access as required during the project to the Contractor and personnel assigned to the project. The Contractor will be responsible for the security of the section of the building involved in the abatement project. It will also be the Contractor's responsibility to allow only authorized personnel into the work area, and to secure all assigned entrances and exits at the end of the workday. Any person entering or leaving the contained areas must sign the Contractor's bound logbook and enter the date and time. The logbook must be located immediately outside the entrance to the Decontamination Unit at all times and be open for inspection by the Owner.

PART 2 PRODUCTS

2.01 MATERIALS:

- A. Wetting Agents: The wetting agent shall be approved by the Engineer.
- B. Sealants: Sealing material shall be both penetrating and bridging and may be applied by a one or two coat system and shall meet the following criteria:
 1. ASTM Standard E-84.
 2. Underwriter's Laboratory approval for Class 1A
 3. Fire Rating: Class A
 - a. Flame Spread: 0-25
 - b. Fuel contribution: 10
 - c. Smoke Density: 5
- C. Containment Bags: Upon approval of the Engineer, containment bags may be utilized for the removal of pipe insulation. Removal shall be as manufacturer's instructions and as described in these specifications.

- D. Framing Materials and Doors: As required to construct temporary decontamination facilities and critical barriers.
 - E. Fire Retardant Clear Polyethylene Sheeting, minimum thickness 8-mil.
 - F. Fire Retardant Black Plastic Sheeting, minimum thickness 6-mil.
 - G. Drums: Asbestos transporting drums, sealable and clearly marked with warning labels as required by OSHA and EPA.
 - H. Plastic Bags: Sealable, asbestos disposal bags, ^{mm} 6-mil thick and labeled
 - I. Signs: Asbestos warning signs for posting at perimeter of work area, as specified in 29 CFR 1926.1101(k)(1)(CIIi).
 - J. Tape: Tape shall be high quality polyethylene film as approved by the Engineer.
 - K. Contamination Control Flooring: As approved.
 - L. Spray Adhesive: As approved.
 - M. Respirators: NIOSH approved with HEPA cartridges.
 - N. Disposable Coveralls: As approved.
- 2.02 TOOLS AND EQUIPMENT:
- A. Air Filtration Device (AFD): Air Filtration Devices shall be equipped with High Efficiency Particulate Absolute (HEPA) filtration systems.
 - B. Scaffolding: Scaffolding, as required to accomplish the specified work, shall meet all applicable safety regulations.
 - C. Transportation Equipment: Transportation Equipment, as required, shall be suitable for loading, temporary storage, transit and unloading of contaminated waste without exposure to persons or property. Waste material shall be stored in 30 cubic yard dosed dumpsters.
 - D. Vacuum Equipment: All vacuum equipment utilized in the work area shall utilize HEPA filtration systems. Vacuum equipment shall be as manufactured by Nilfisk of America of Malvern, Pennsylvania, Norclean Vacuum Systems distributed by Power Products and Services Co., Inc., Forest, Virginia or approved equal.
 - E. Vacuum attachments: Soft brush attachment, Asbestos Scraper Tool, Drill Dust Control Kit.
 - F. Electric Sprayer: An electric airless sprayer suitable for application of encapsulating material.
 - G. Water Sprayer: The water sprayer shall be an airless or other low-pressure sprayer for amended water application.
 - H. Portable Shower: For personnel decontamination.
 - I. Water Atomizer: Powered air misting device equipped to operate continuously.

- J. Other Tools and Equipment: Provide other suitable tools for the stripping, removal, encapsulation, and disposal activities including but not limited to hand-held scrapers, wire brushes, sponge, rounded-edge shovels, brooms, and carts.

PART 3 EXECUTION

3.01 GENERAL CONSIDERATIONS:

A. APPROVALS AND INSPECTION:

All temporary facilities, work procedures, equipment, materials, services, and agreements must strictly adhere to and meet these contract specifications along with EPA, OSHA, NIOSH, regulations and recommendations as well as any other Federal, State, and Local regulations. Where there exists overlap of these regulations, the most stringent one applies.

Modifications to this isolation and sealing methods, procedures, and design may be considered if all elements of proper and safe procedures to prevent contamination and exposure can be demonstrated. Written modifications to these specifications must be made to the Engineer for review before they can be used for work on this project.

B. DAMAGE AND REPAIRS TO THE WORK SITE:

Asbestos removal and disposal shall be performed without damage to the adjacent roadways, sidewalks, trees, buildings and structures outside the limit of work. Contractor shall provide protection of these items and materials as part of the work area preparation. Where asbestos abatement activity causes damage, the Contractor shall patch, repair, replace or otherwise restore the area to its original condition at no additional cost to the Owner.

C. BARRIERS AND ISOLATION AREAS:

Construct and maintain suitable critical barriers within the buildings to separate work areas from spaces occupied by the adjacent building. Critical barriers shall be of sufficient size and strength to prevent staff, the public and others from entering the work areas.

Warning signs shall be posted on all critical barriers at the commencement of the work area preparation, as required in 1926.1101 of the Occupational Safety and Health Standards Federal Register, Volume 51, Number 119, June 20, 1986. The signs shall display the proper legend in the lower panel, with letter sizes and styles of a visibility at least equal to that specified in OSHA Standard 1926.1101.(k)(1)(ii). The signs will read as follows:

Danger
Asbestos
May Cause Cancer
Causes Damage to Lungs
Authorized Personnel Only

The signs shall be posted at the perimeters of asbestos removal, demolition or construction areas where the asbestos-containing material to be removed exists.

The Contractor shall maintain all temporary and critical barriers, facilities and controls as long as needed for the safe and proper completion of the work. Work will not be allowed to commence until all control systems are in place and operable.

No barriers shall be removed until the work areas are thoroughly cleaned, and all debris has been properly bagged and removed from work areas, and the area has passed final visual inspection, in accordance with provisions detailed herein.

D. HEPA FILTRATION

As necessary, adequate negative pressure shall be provided within the enclosure as specified below.

1. After asbestos work area is totally isolated, and prior to commencement of work, the Engineer will perform, at their discretion, a visual inspection of the work area. This will consist of checking the integrity of barriers including smoke testing the containment if deemed necessary by the Engineer. This does not in any way relieve the Contractor's responsibilities to ensure the isolation of the work area. The volume of air within the contained work area shall be changed a minimum of four (4) times per hour. A pressure differential reading of -0.02 inches of water shall be maintained in the negative pressure work area relative to adjacent areas. A manometer with a strip chart recorder shall be used to show that the proper pressure differential is being maintained.
2. Equipment used for producing a negative pressure work area shall have a filtering device that is at least 99.97% efficient at a 0.3-micron pore size. Filters meeting these standards are referred to as High Efficiency Particulate Absolute (HEPA) filters. The HEPA filtration units shall be equipped with the following:
 - a. Magnehelic gauge to monitor the unit's air pressure difference across the filters and be able to interpret magnehelic readings to cubic feet per minute (CPM).
 - b. An affixed label, clearly marked and conspicuous, showing the most recent installation date and hour reading of the primary internal HEPA filter.
 - c. A clock to record the unit's operation time.
 - d. Automatic shut off for filter failure or absence.
 - e. Audible alarm for unit shutdown.
 - f. Amber flashing warning light for filter loading.
 - g. The unit must be equipped with a safety system that prevents it from being operated with the HEPA filter in an improper orientation.
 - h. All flexible ducting, vent tubing, adapter plates and other equipment used for the passage of filtered air shall be undamaged, uncontaminated, and free of air leaks at all points.
3. Pre-filters shall be changed frequently during the abatement.
4. All HEPA units shall exhaust to the outside of the building. All HEPA units shall be DOP tested on-site by the Contractor.
5. Air movement shall flow uninterrupted from outside the work area through the Decontamination Unit into the work area. There shall be no other openings for air to enter the containment unless approved by the Engineer in writing.
6. HEPA filtration units shall be placed as far as possible from the air intake to the containment to prevent short cycling of fresh air.
7. This containment, along with the decontamination chamber, shall constitute the critical containment of the work area from the surrounding areas. All openings to this critical containment are to be sealed except where air must enter the work Site due to the use of exhaust equipment.

8. Unless approved by the Engineer, air shall enter the critical containment only through the Decontamination Unit. A pressure differential meter will be installed and maintained. If pressure differential drops below -0.02 inches of water, stop work until proper negative pressure is restored.
9. Written modifications to these isolations and sealing methods, procedures, and design may be considered if all elements of proper and safe procedures to prevent contamination and exposure can be demonstrated.
10. Written modifications to these specifications must be made to the Engineer for review before they can be used for work on this project.

3.02 DISPOSAL OF ASBESTOS WASTE:

- A. Waste removal procedure shall be performed in accordance with all regulations as set forth by the agencies having authority to regulate.
- B. Provide proof that disposal sites for the waste materials have current and valid permits to dump asbestos waste at the time of the pre-construction meeting.
- C. Obtain receipts from the dumping site(s) and submit to the Engineer upon request for final payment.
- D. Warning labels having permanent, waterproof print and adhesive shall be affixed to all bags, trucks, drums (lids and sides), and other containers used to store and/or transport asbestos-containing material. Labels must be conspicuous and legible and contain the following warning:

Danger
Contains Asbestos Fibers
May Cause Cancer
Causes Damage to Lungs
Do Not Breathe Dust
Avoid Creating Dust

- E. Be responsible for all necessary precautions to prevent pollution by spilling during the performance of services and shall assume full responsibility for all Contractor caused spills, which shall be cleaned up at the Contractor's expense.

3.03 HOUSEKEEPING:

- A. Throughout the work period, maintain the work areas in a standard of cleanliness as specified throughout these specifications.
 1. Contaminated disposable clothing, respirator filters, and other debris shall be bagged and sealed at the end of each workday.
 2. All asbestos generated by either removal or repair shall be bagged immediately and not allowed to be left exposed at the end of each workday.
 3. Respirators shall be thoroughly cleaned at the end of each workday and stored for the next day's use.
 4. Retain all stored items in an orderly arrangement allowing maximum access, not impeding traffic, and providing the required protection materials.

5. Do not allow the accumulation of scrap, debris, waste material, and other items not required for completion of the work.
6. Provide adequate storage for all items awaiting removal from the job Site, observing all requirements for fire protection and protection of the ecology.
7. Daily and more often if necessary, inspect the work areas and adjoining spaces, and pick up all scrap, debris, and waste material. Remove all such items to the place designated for their storage.
8. Maintain the Site in a neat and orderly condition at all times.

3.04 TEMPORARY UTILITIES:

Provide temporary connections to electrical and water utilities as they exist in the building and provide temporary facilities as required and necessary to carry out the work.

A. ELECTRICAL SERVICE:

1. General: Comply with applicable NEMA, NECA and UL standards and governing regulations for materials and layout of temporary electrical service as necessary. All power connections and panel work are to be performed by a licensed electrician.
2. Temporary Power: Provide power sources as required. Sub-panel and disconnect shall be sized and equipped to accommodate all electrical equipment required for completion.
3. Voltage Differences: Provide I.D. warning signs at power outlets which are other than 110-120-volt power. Provide polarized outlets for plug-in type outlets, to prevent insertion of 110-120 volt plugs into higher voltage outlets.
4. Ground Fault Protection: Provide all receptacle outlets equipped with ground fault circuit interrupters (GFCI) and reset button for plug-in connection of equipment.
5. Electrical Power Cords: Use only graded extension cords.

C. LIGHTING:

1. The Contractor must supply temporary lighting for all lighting requirements within work areas as required.

END OF SECTION

**SECTION 02 83 19
LEAD-BASED COATINGS REMOVAL**

PART 1 - GENERAL

1.01 DESCRIPTION:

- A. This Section specifies demolition of structures involving lead paint.
- B. Examine all Drawings and all other Sections of the Specifications for requirements of related sections affecting the work of this Section. A lead determination at the site indicates that various building components are considered to be lead-containing.
- C. The work of this Section shall be performed as stated herein. In performing the work of this Section, the Contractor shall refer to other Sections for additional procedures. The Contractor is responsible for the coordination of the work of this Section with related work. No delays in completion of the work may be claimed for lack of coordination.
- D. Contractor shall comply with all applicable local, State, and Federal guidelines and regulations regarding all work involving the presence of lead-containing paint.
- E. The work of this Section references work of the Contractor performing the demolition work. Additionally, requirements of the General Contractor regarding coordination and related work are identified in this Section and shall be considered the responsibility of the General Contractor.

1.02 DESCRIPTION OF WORK:

- A. The work of this Section includes demolition of lead impacted structures. The procedures described herein apply to all demolition work where a worker may be occupationally exposed to lead as well as to the disposal of the demolition debris. The Contractor shall assume that any painted surface not tested under this specification shall be assumed to contain lead paint and it shall be the Contractor's responsibility to protect workers performing under this Contract. This may require additional testing by the Contractor to verify lead content.
- B. The Contractor shall assume full responsibility and liability for the compliance with all applicable Federal, State and local regulations pertaining to work practices, hauling and disposal of hazardous waste, protection of workers and visitors to the site, and persons occupying areas adjacent to the site. The Contractor shall hold the Owner, Engineer and Engineer's Subconsultant (if any) harmless for failure to comply with any applicable work, hauling, disposal, safety, health or regulation on the part of itself, its workers or its subcontractors.
- C. The Contractor is required to ensure the protection of workers performing any related work that will affect surfaces coated with lead containing paint as well as protecting the public and the environment from exposure to lead dust.
- D. Testing of interior and exterior painted surfaces contain both lead and polychlorinated biphenyls (PCBs). Contractor shall coordinate the work of this Section 02 41 16 – DEMOLITION.
- E. CODES AND STANDARDS:
 - 1. All work shall conform to the standards set by applicable Federal, State and local laws, regulations, ordinances, and guidelines in such form in which they exist at the time of the work on the contract and as may be required by subsequent regulations.

2. In addition to any detailed requirements of the Specification, the Contractor shall at its own cost and expense comply with all laws, ordinances, rules and regulations of Federal, State, regional and local authorities regarding handling and storing of lead waste material.

3. The following references are cited as applicable standards and regulations as amended:

a. Code of Federal Regulations (CFR) Publications:

29 CFR 1910	General Industry
29 CFR 1926.55	Gases, Vapors, Fumes, Dusts and Mists
29 CFR 1926.57	Ventilation
29 CFR 1926.62	Lead in Construction
29 CFR 1926.200	Signs, Signals and Barricades
29 CFR 1926.354	Welding, Cutting and Heating in Way of Preservative Coatings
29 CFR Subpart T	Demolition
40 CFR 50	National Primary and Secondary Ambient Air Quality Standards for Lead
40 CFR 61 Subpart A	General Provisions
40 CFR 61.152	Standard for Waste Manufacturing, Demolition, Renovation, Spraying, and Fabricating Operations.
40 CFR 241	Guidelines for the Land Disposal of Solid Wastes
40 CFR 257	Criteria for Classification of Solid Waste
40 CFR 261 and 262	Waste Disposal Facilities and Practices

b. American National Standards Institute (ANSI) Publications:

29.2-79	Fundamentals Governing the Design and Operation of Local Exhaust Systems
288.2-80	Practices for Respiratory Protection

c. National Institute of Occupational Safety and Health (NIOSH) Publications:

Manual of Analytical Methods, 4th Ed.

d. Underwriters Laboratories, Inc. (UL) Fire Resistance Directory Publications:

586-77 (R 1982)	Test Performance of High Efficiency Particulate, Air Filter Units
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F. All regulations by the above and other governing agencies in their most current version are applicable throughout this project. Where there is a conflict between this Specification and the cited State, Federal, or local regulations, the more restrictive or stringent requirements shall prevail.

This section refers to many requirements found in these references, but in no way is it intended to cite or reiterate all provisions therein or elsewhere. It is the Contractor's responsibility to know, understand, and abide by all such regulations and common practices.

1.03 DEFINITIONS:

A. The following definitions apply to the performance of the work of this project.

1. Action Level: An airborne concentration of lead above 30 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) as a time weighted average (TWA) for more than 30 days per year.
2. Area Monitoring: Sampling of lead concentrations within the work area and outside the work area which is representative of the airborne concentrations of lead.
3. Clean Room: An uncontaminated change room directly adjacent to the work area having facilities for storage of employees' personal clothing and uncontaminated work clothes, materials and equipment provided when the airborne exposure to lead is above the PEL.
4. Contractor: The Contractor who is performing work involving lead containing paint under this Section.
5. Decontamination Area: A contained area adjacent to or connected to the abatement work area and consisting of an equipment room, shower area, and clean room which is used for decontamination of workers, materials and equipment.
6. HEPA Filter Equipment: High efficiency particulate air (HEPA) filtered vacuuming or exhaust ventilation equipment with a UL 586 filter system. Filters shall be of 99.97 percent efficiency for retaining 0.3 micrometer diameter particles.
7. Lead-Containing Paint: Paint, varnish, or stain, which contains lead in excess of 0.5% lead by weight.
8. Lead Permissible Exposure Limit (PEL): 50 $\mu\text{g}/\text{m}^3$ of air, based upon an 8-hour time weighted average.
9. Sample Location: Area or place where an air or wipe sample is collected.
10. Time Weighted Average (TWA): The TWA is an 8-hour time weighted average for the test of the concentration of lead for worker exposure.
11. Wet Cleaning: The process of removing lead contamination from building surfaces, equipment and other objects by using cloths, mops, or other cleaning tools which have been dampened with water, and by afterwards disposing of these cleaning tools as lead-impacted wastes.
12. Work Area: A controlled-access work area, which has no plastic sheeting or other containment barriers, erected to separate the trades.

1.04 SUBMITTALS:

A. Notifications:

1. Provide in proper and timely fashion, all necessary notifications to relevant Federal, State, and local authorities and obtain and comply with provisions of all permits or applications required by the work specified, as well as make all required submittals required under those

auspices. The Contractor shall indemnify Owner, Engineer and Consultant from, and pay for all claims resulting from failure to adhere to these provisions. Costs for all permits, applications, and the like are to be assumed by the Contractor.

B. Provide four (4) copies of the following Submittals at the Pre-Construction Conference:

1. Copies of all notifications, permits, applications, licenses and like documents required by Federal, State, or local regulations and this specification obtained or submitted in proper fashion,
2. Copies of written medical opinions for each employee who may be occupationally exposed to lead as required by 29 CFR 1926.62 (j)(3)(v),
3. Copies of supervisors' and workers' training certificates,
4. Record of successful respirator fit testing performed by a qualified individual within the previous 6 months for each employee to be used on this project with the employee's name and social security number with each record,
5. Employer's Lead Compliance Program as required by 29 CFR 1926.62, including proposed respiratory protection program and medical monitoring for all employees throughout all phases of the job, including make, model and NIOSH approval numbers of respirators to be used; worker orientation plan; written description of all proposed procedures, methods, or equipment to be utilized, including those that may differ from the Contract Specifications. In all instances, the Contractor must comply with all applicable Federal, State and local regulations.
6. Proposed number and type (i.e., hazardous waste or non-hazardous waste, open top, front loading, etc.) of dumpsters for waste, proposed location(s),
7. A list of all equipment to be used on Site, by make and model,
8. Chain of Command of responsibility at work site including supervisors and competent person, their names, resumes and certificates of training and phone numbers,
9. List of total number of supervisors and workers intended to be assigned to the project, including name and lead awareness qualifications,
10. Safety Data Sheets on potentially hazardous materials to be used on the project,
11. Waste Disposal Plan which describes the waste stream and the disposal means (i.e. landfill, recycle, etc.) and includes the name, address, and ID number of the proposed hazardous waste hauler, waste transfer route, and proposed disposal reclamation or treatment facility,
12. Name and address of the proposed construction debris site,
13. Construction schedule including sequence of critical work.
14. No work on the project will be allowed to begin until the Pre-Construction Submittals as listed herein are accepted by Engineer. Any delay caused by the Contractor's refusal to submit this documentation in a timely fashion does not constitute a claim for extra compensation or a time extension.

C. Submit the following to the Engineer as a Post-Construction submittal package:

1. Copies of waste manifests and receipts acknowledging disposal of all lead waste material from the project, showing delivery date, quantity, and appropriate signature of landfill's authorized representative,
2. DES approval for all waste reduction techniques, if utilized,
3. A notarized copy of the daily list of workers and site entry-exit logbook,
4. All personnel monitoring results,

1.05 GENERAL WORK PROCEDURES:

- A. Work shall be carried out in sequential phases. Inspection and approval of each phase by the Engineer shall be sought and gained before proceeding to the next phase and in accordance with the schedule approved. This shall include demolition requirements for work area clearance and work area release before other work. As a Contract requirement, any reasonable delay caused by this requirement will not constitute a basis for claim against the Engineer or Consultant. The Contractor must coordinate the work of this Section with the work of all other trades.
- B. Any storage of demolition materials will be subject to Owner's approval. Coordinate storage of PCB-containing demolition debris with the requirements of Section 02 41 16 – DEMOLITION. See Section 02 82 33 – ASBESTOS ABATEMENT for asbestos-containing material handling and abatement requirements. Assure security of debris at all times.

1.06 SPECIAL CONSIDERATIONS:

- A. Testing References:
 1. Testing for lead paint has been performed on a representative number of painted components at the Substation Control House at the former Seymour 20F Substation for TCLP lead.
- B. The Contractor(s) shall follow the requirements of this Section regarding component removal, demolition, worker exposure and protection, work area cleaning, and waste disposal.
- C. Work Affected – In general, the following activities are minimum requirements of this Section and affect the demolition performed on the painted components:
 1. No demolition activities may occur which increase the workers' exposure above the Action Level of 30 $\mu\text{g}/\text{m}^3$. The Contractor shall fully comply with the OSHA Lead Standard 29 CFR 1926.62.
 2. Workers shall be informed of the components to be demolished that have been identified as containing lead.
 3. Worker protection, at a minimum, shall comply with the OSHA Lead Standard 29 CFR 1926.62. Worker Right to Know and Health and Safety Standards of 1926.62 shall also apply to the work of this Section.
 4. Separation of Trades: Unprotected, untrained workers or trades shall not perform any related work within the same vicinity as demolition-involving components identified with lead.
 5. Clean-up Activities: The Contractor shall maintain work zones free of accumulated debris and paint chips.

1.07 REPORT OF FINDINGS:

- A. Testing of the interior paint and exterior paint has been performed. A copy of the sampling results and corresponding laboratory data reports are provided attached to these specifications.
- B. Based on the testing performed to date, lead-based coatings were identified on various representative surfaces on the interior and exterior of the Site building.

1.08 FEES, PERMITS & LICENSES:

- A. The Contractor shall pay all licensing fees, royalties, and other costs necessary for the use of any copyrighted or patented product, design, invention, or process in the performance of the work specified in this Section. The Contractor shall be solely responsible for costs, damages, or losses resulting from any infringement of these patent rights or copyrights. The Contractor shall hold the Owner, Engineer and Engineer's Subconsultant (if any) harmless from any costs, damages, and losses resulting from any infringement of these patent rights or copyrights. If the Contract Documents requests the use of any product, design, invention, or process that requires a licensing, patent or royalty fee for use in the performance of the job, the Contractor shall be responsible for the fee or royalty fee and shall disclose the existence of such rights.
- B. The Contractor shall be responsible for costs for all licensing requirements, where applicable and notification requirements and all other fees related to the Contractor's ability to perform the work in this Section.
- C. Secure all necessary permits for work under this Section, including hauling, removal, and disposal, fire, and materials usage, or any other permits required to perform the specified work.

1.09 CLEAN-UP:

- A. Maintain the work site in a neat and orderly manner at all times, so as not to interrupt or infringe upon the work of other trades.
- B. Comply with all requirements for release of work areas as described in the project specification.
- C. It is the prerogative of the Engineer to inspect whenever deemed necessary, the Contractor is responsible for meeting, and correcting any deficiencies discovered which do not meet the current applicable regulations and requirements of these specifications.

1.10 COORDINATION:

- A. At no time shall the Contractor cause or allow to be caused conditions which may cause risk or hazard to the general public or conditions that might impair safe use of the facility. The use of the on-site electricity, water or like utilities by the Contractor shall be as specified in Sections 01 11 00 – CONTROL OF WORK AND MATERIALS and 01 14 00 – SPECIAL PROVISIONS.
- B. Coordinate the work of this Section with that of all other work under this contract. Phasing and scheduling of this project will be subject to the approval of the Engineer. The work of this Section shall be scheduled and performed so as not to impede the progress of the project as a whole. Work shall not proceed in any area without the express consent of the Engineer. The Contractor shall be available within 24 hours' notice for additional work if after acceptance of the work it is found that complete demolition was not achieved from the initial work effort as determined by the Engineer.
- C. The proposed schedule for the work in this Section shall show the time involved from start to finish of demolition operations, including preparation, removal, clean-up, Consultant's inspections and de-mobilization portions of the job.

- D. A final schedule shall then be prepared and coordinated with the Owner, Engineer and Engineer's Subconsultant (if any). The final scheduling shall be submitted in writing before the commencement of work.
- E. Complete activities in the phases of the agreed upon final schedule. The work must be completed in a continuous, uninterrupted operation.
- F. Inspections: The Engineer may perform visual inspections during the work of this Section, as described below. The Contractor shall not proceed with work until the Contractor has received the Engineer's approval at the stages identified below:
 - 1. During: Before the commencement of a proposed alternative method other than specified.
 - 2. Post Inspection: At the completion of work and final clean-up, before clearance or removal of any critical barriers and decontamination unit from the work area.
 - 3. Waste Removal Inspection: Notify the Engineer of impending removal of hazardous waste from the site.

1.11 AUTHORITY TO STOP WORK:

- A. The Engineer has the authority to stop the demolition work, at any time the Engineer determines that conditions are not within the specifications and applicable regulations. The stoppage of work shall continue until conditions have been corrected and corrective steps have been taken to the satisfaction of the Engineer. Standby time required to resolve violations shall be at the Contractor's expense and shall not be cause for extending the completion date.

1.12 EMERGENCY PRECAUTIONS:

- A. The Contractor shall establish emergency and fire exits from the work area.
- B. When an injury occurs, the Contractor shall stop work until the injured person has been removed from the work area.

1.13 DISPOSAL OF WASTE MATERIAL:

- A. General:
 - 1. The Contractor and transporting Contractor will be required to comply with the Resource Conservation and Recovery Act (RCRA), Toxic Substances Control Act (TSCA), and with all applicable State and local regulations.
 - 2. Based on the characterization done to date by the Engineer, there are no known lead TCLP exceedances.
 - 3. The Contractor and all sub-contractors shall comply with all EPA regulations.

PART 2 – PRODUCTS

2.01 GENERAL REQUIREMENTS:

- A. The Contractor shall deliver all materials and equipment to the Site in the original containers bearing the name of the manufacturer, and details for proper storage and use.

- B. All materials or equipment delivered to the Site shall be unloaded, temporarily stored, and transferred to the work area in a manner that shall not interfere with other trades working in the area.
- C. Unloading and temporary storage sites, and transfer routes, must be approved in advance by the Owner.
- D. Damaged or deteriorated materials may not be used and must be promptly removed from the premises. Material that becomes contaminated shall be packaged and legally disposed in an approved, secure landfill.

2.02 MATERIALS:

- A. All materials and equipment proposed to be used on this project shall be subject to the acceptance of the Engineer. The list of required materials shall include, but not necessarily be limited to the following:
 - 1. Fire retardant polyethylene sheeting, minimum thickness of six (6)-mil.
 - 2. Plastic bags, minimum thickness of six (6)-mil.
 - 3. Duct Tape, up to 3-inch width.
 - 4. Lead Warning Signs, as required by the DPH Regulations and OSHA Hazard Communication requirements.
 - 5. Flexible duct for ventilation units (if required).
 - 6. Spray adhesive, fire retardant.
 - 7. Personal Protective Equipment, NIOSH approved respirators.
 - 8. Ventilation units with HEPA filtration and exhaust fans.
 - 9. HEPA vacuums.
 - 10. Trisodium-Phosphate (TSP) and product data.
 - 11. Cloth tarpaulin.

2.03 TOOLS AND EQUIPMENT:

- A. Transportation Equipment: Transportation equipment, as required, shall be suitable for loading, temporary storage, transporting, and unloading waste without exposure to persons or property. All over-the-road transportation equipment must carry the appropriate hazardous waste transport licenses and insurance.
- B. Vacuum Equipment: All vacuum equipment utilized in the work area shall utilize HEPA filtration systems.
- C. Water Sprayer: The water sprayer shall be an airless or other low-pressure sprayer for water application.
- D. Other Tools and Equipment: The Contractor shall provide other suitable tools including but not limited to: rounded edge shovels, rakes, brooms, and carts.

- E. The Contractor shall provide ground fault circuit interrupters (GFCI) to protect all electrical cord and connections.
- F. Approved lighting equipment for use in the work area.
- G. Scaffolding: Scaffolding, as required to accomplish specified work, shall meet all applicable Federal, State and local safety regulations and used in accordance with manufacturer's specifications.

PART 3 – EXECUTION

3.01 SCHEDULING:

- A. The Contractor shall coordinate all scheduling with the Engineer. A schedule of work shall be submitted to the Engineer before contract performance.

3.02 UTILITIES:

- A. Provide all necessary connections for temporary utilities in the workplace during work. Shut down and disconnect all electrical power to the work area so that there is no possibility of reactivation and electrical shock during the work. The temporary electrical power shall be in accordance with all OSHA requirements.

3.03 IDENTIFICATION OF HAZARDS:

- A. Prior to any work involving lead-containing items, the Contractor shall identify all work activities in which a worker may be occupationally exposed to lead.
- B. The Contractor shall initially determine if any worker may be exposed to lead above the action level.

3.04 BARRIERS AND ISOLATION AREAS:

- A. All lead in demolition work areas shall remain isolated from all other trades on the project and remain inaccessible to the public. The Contractor shall monitor the access to the demolition work areas. The below listed items are required to control the generation of lead-containing dust during demolition activities. The Contractor is ultimately responsible for cleaning all generated dust and paint debris from demolition operations and must maintain work areas free from lead dust generated from demolition activities.
 - 1. Signs shall be posted at all approaches to the work area warning that work-involving lead is being conducted in the vicinity. Signs shall be in bold lettering not smaller than two inches tall.
 - 2. Barriers shall not be removed until the work areas are thoroughly cleaned and approved by the Consultant.

3.05 APPROVALS AND INSPECTIONS:

- A. All temporary facilities, work procedures, equipment, materials, services, and agreements must strictly adhere to and meet this Section along with EPA, OSHA, regulations and recommendations as well as Federal, State, and local regulations. Where there exists overlap of these regulations, the most stringent one applies. All work performed by the Contractor is further subject to approval of the Engineer.

3.06 PERSONNEL SAMPLING – CONTRACTOR:

- A. Perform personnel air sampling during all demolition work to determine worker exposure limits. The results of such sampling shall be posted, provided to individual workers, and submitted to the Engineer as described herein.
- B. Provide sampling to check personal exposure levels. Representative sampling shall be taken for the duration of the work shift or for eight hours, whichever is less. Personal samples need not be taken for repeated working conditions if working conditions remain unchanged but must be taken every time there is a change in the removal operation, either in terms of the location or the type of work. Sampling will be used to determine eight-hour Time-Weighted-Averages (TWA). Personal sampling shall be as outlined in OSHA Standard 29 CFR 1926.62.
- C. Air sampling results shall be transmitted to the Engineer and individual workers available at the job site in written form no more than forty-eight (48) hours after the completion of a sampling cycle. The reporting document shall list each sample's result, sampling time and date, personnel monitored and their social security numbers (last four digits only), flow rate, sample duration, sample yield, cassette size, and analyst's name and company, and shall include an interpretation of the results. Air sample analysis results will be reported in micrograms/cubic meter ($\mu\text{g}/\text{m}^3$).
- D. The Contractor's testing lab shall be AIHA accredited for analysis of metals. The Contractor shall submit for the Engineer's review and acceptance the name and address of the laboratory, certification(s) of AIHA accreditation for metal analysis, listing of relevant experience in air lead analysis, and presentation of a documented Quality Assurance and Quality Control program.
- E. Air monitoring frequency will be established in accordance with the requirements set forth in 29 CFR 1926.62.

3.07 WORK PROCEDURES:

- A. The Contractor shall initiate, and continue, sufficient engineering and work practice controls, as described in the Contractor's Lead Compliance Program, to reduce and maintain worker exposures to lead at or below the Action Level.
- B. The following work practices are specifically required by these specifications:
 - 1. All persons except those directly involved in the work shall be excluded from the work area. Physical barriers shall be used, where necessary, to limit access to the work area for the duration of the demolition operations. Warning signs may be posted in accordance with applicable regulations.
 - 2. Provide hand-washing facilities and assure that all workers thoroughly wash their hands and face upon exiting the work area. Workers shall pay careful attention to cleanse the hands and face when decontaminating. Provide hygiene facilities, including shower, as required based on initial assessment and continued monitoring.
 - 3. Thoroughly wet the buildings or areas to be demolished and mist the air to reduce the potential for creating airborne lead and dust.
 - 4. All equipment used by the workers inside the work area shall be either left in the work area or thoroughly decontaminated before being removed from the area. Extra work clothing (in addition to the disposable suits supplied by the Contractor) shall be left in the clean area until the completion of work in that area. The clean area shall be cleaned of all visible debris and disposable materials daily.
 - 5. Under no circumstances shall workers or supervisory personnel eat, drink, smoke, chew gum, or chew tobacco in the work area; to do so shall be grounds for the Engineer to stop all demolition operations. Only in the case of life-threatening emergency shall workers or

supervisory personnel be allowed to remove their protective respirators while in the work area. In this situation, respirators are to be removed for as short a duration as possible.

6. No demolition activities may occur which increase the workers exposure above the Action Level of $30 \mu\text{g}/\text{m}^3$. The Contractor shall fully comply with the OSHA Lead Standard 29 CFR 1926.62.

- C. Workers shall be informed of the components to be demolished that are identified as containing lead.

3.08 STORAGE OF WASTE:

- A. Use of waste containers on Site shall be controlled under the following requirements:

1. Location of waste containers on site shall be subject to Owner's approval.
2. The Contractor shall comply with all Federal, State, and local regulations and ordinances regarding lead waste storage.

END OF SECTION

**SECTION 31 00 00
EARTHWORK**

PART 1 - GENERAL

1.01 WORK INCLUDED:

The Contractor shall make excavations of normal depth in earth for removal of utilities, shall backfill and compact such excavations to the extent necessary, shall furnish the necessary material, and shall make miscellaneous earth excavations and do miscellaneous grading.

The Contractor shall backfill excavated areas to match existing grades unless otherwise required by the Owner and Engineer. No material shall be imported to the site to be used as backfill as part of this contract. No excavated material will be removed from the site as part of this contract.

Contaminated soils may be encountered during utility excavations and test pitting. Refer to Section 01 35 29 – HEALTH AND SAFETY PLAN for additional details. Soils shall be backfilled in the general area it was excavated.

1.02 RELATED WORK:

- A. Section 01 11 00 - CONTROL OF WORK AND MATERIALS
- B. Section 01 14 00 – SPECIAL PROVISIONS
- C. Section 01 35 29 – HEALTH AND SAFETY PLAN
- D. Section 01 57 19 - ENVIRONMENTAL PROTECTION
- E. Section 02 41 13.36 – UTILITY ABANDONMENT
- E. Section 31 11 00 - CLEARING AND GRUBBING
- FA. Section 31 50 00 - SUPPORT OF EXCAVATION

1.03 REFERENCES:

ASTM International (ASTM)

ASTM	C131	Test Method for Resistance to Degradation of Small Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
ASTM	C136	Method for Sieve Analysis of Fine and Coarse Aggregates.
ASTM	C330	Specification for Lightweight Aggregate for Structural Concrete.
ASTM	D1556	Test Method for Density of Soil in Place by the Sand Cone Method.
ASTM	D1557	Test Methods for Moisture-density Relations of Soils and Soil Aggregate Mixtures Using Ten-pound (10 Lb.) Hammer and Eighteen-inch (18")
ASTM	D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft ³) (2700 kN-m/m ³).

ASTM D2922 Test Methods for Density of Soil and Soil-aggregate in Place by Nuclear Methods (Shallow Depth).

ASTM D6938 Test Methods for Density of Soil and Soil-aggregate in Place by Nuclear Methods (Shallow Depth).

ASTMD6913 Standard Test Method Particle Size Analysis of Soils

New Hampshire Department of Environmental Services Chapter Env-Or 600 – Contaminated Site Management

1.04 PROTECTION OF EXISTING PROPERTY:

- A. Protect existing improvements scheduled to remain (e.g underground drainage infrastructure, existing hydrants as shown on Contract Drawings) from damage caused by settlement, lateral movements, undermining, washout and other hazards created by earthwork operations.
- B. In case of any damage or injury caused in the performance of the work, the Contractor shall, at its own expense, make good such damage or injury to the satisfaction of, and without cost to, the Owner. Existing roads, sidewalks, and curbs damaged during the project work shall be repaired or replaced to at least the condition that existed at the start of operations. The Contractor shall replace, at its own cost, existing benchmarks, observation wells, monuments, and other reference points, which are disturbed or destroyed.
- C. Buried drainage structures and pipes shall be clearly marked to indicate the hazard. Markers shall indicate limits of danger areas, by means which will be clearly visible to operators of trucks and other construction equipment and shall be maintained at all times until completion of project.

1.05 DRAINAGE:

- A. The Contractor shall provide, at its own expense, adequate drainage facilities to complete all work items in an acceptable manner. Drainage shall be done in a manner so that runoff will not adversely affect construction procedures or cause excessive disturbance of underlying natural ground or abutting properties.
- B. Areas to be filled to achieve final elevations shall be graded such that surface water shall drain into existing catch basins. Surface slopes shall be a minimum of 1.5% and a maximum of 33% (i.e., a 3:1 horizontal-to-vertical grade).

1.06 FROST PROTECTION AND SNOW REMOVAL:

- A. The Contractor shall, at its own expense, keep earthwork operations clear and free of accumulations of snow as required to carry out the work.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Excavated material shall be placed back into the excavation and compacted as specified herein. In general, the excavated material shall be reused on-site in the area from which the material was excavated.

PART 3 - EXECUTION

3.01 DISTURBANCE OF EXCAVATED AND FILLED AREAS DURING CONSTRUCTION:

- A. Contractor shall take the necessary steps to avoid disturbance of subgrade during excavation and filling operations, including restricting the use of certain types of construction equipment and their movement over sensitive or unstable materials, dewatering and other acceptable control measures.
- B. Soils excavated for test pitting or utility shut-off purposes may be contaminated. Any excavated soil shall be backfilled in the general area it was excavated

3.02 EXCAVATION:

A. GENERAL:

- 1. The Contractor shall perform all work of any nature and description required to accomplish the work as shown on the Drawings and as specified.
- 2. Excavations, unless otherwise required by the Engineer, shall be carried only to the depths and limits shown on the Drawings. If unauthorized excavation is carried out below required subgrade and/or beyond minimum lateral limits shown on Drawings, it shall be backfilled with gravel borrow and compacted at the Contractor's expense as specified below, except as otherwise indicated. Excavations shall be kept in dry and good conditions at all times, and all voids shall be filled to the satisfaction of the Engineer.
- 3. In paved areas, the Contractor shall first cut pavement as specified in paragraph 3.02 B.1 of this specification, strip pavement and pavement subbase separately from underlying soils. All excavated materials shall be stockpiled separately from each other within the limits of work.

B. TRENCHES:

- 1. Prior to excavation, trenches in pavement shall have the traveled way surface cut in a straight line by a concrete saw or equivalent method, to the full depth of pavement. Excavation shall only be between these cuts. Excavation support shall be provided as required to avoid undermining of pavement. Cutting operations shall not be done by ripping equipment.
- 2. Trenches shall be excavated to such depths as will permit the removal of pipes as indicated on the Drawings. Trench widths shall be as shown on the Drawings or as specified.
- 3. Trenches shall be made as narrow as practicable and shall not be widened by scraping or loosening materials from the sides. Every effort shall be made to keep the sides of the trenches firm and undisturbed until backfilling has been completed.
- 4. If, in the opinion of the Engineer, the subgrade, during trench excavation, has been disturbed as a result of rain, surface water runoff or groundwater seepage pressures, the Contractor shall remove such disturbed subgrade to a minimum of 12 inches and replace with crushed stone wrapped in filter fabric. The cost of removal and replacement shall be borne by the Contractor.
- 5. The Contractor shall be responsible for attaining and abiding by any trench permits required by the Town of Jaffrey.
- 6. All trenches required to be permitted must be attended, covered, barricaded, or backfilled. Covers must be road plates at least ¾-inch thick or equivalent, barricades must be fences

at least 6-feet high with no openings greater than 4-inches between vertical supports and all horizontal supports required to be located on the trench-side of the fencing.

C. EXCAVATION NEAR EXISTING STRUCTURES:

1. Attention is directed to the fact that there are pipes, manholes, drains, and other utilities in certain locations. An attempt has been made to locate all utilities on the Contract Drawings, but the completeness or accuracy of the given information is not guaranteed.
2. As the excavation approaches pipes, conduits, or other underground structures, digging by machinery shall be discontinued and excavation shall be done by means of hand tools, as required. Such manual excavation, when incidental to normal excavation, shall be included in the work to be done under items involving normal excavation.
3. Where determination of the exact location of a pipe or other underground structure is necessary for properly performing the work, the Contractor shall excavate test pits to determine the locations. See Section 01 14 00 – Special Provisions for additional test pit details.

END OF SECTION

**SECTION 31 11 00
CLEARING AND GRUBBING**

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. The Contractor shall do all required clearing and grubbing as indicated on the Drawings or herein specified in the area required for construction operations on the Owner's land or in the Owner's permanent or temporary easements and shall remove all debris resulting therefrom.
- B. Unless otherwise noted, all areas to be cleared shall also be grubbed.
- C. The Contractor shall not clear and grub outside of the area required for construction operations.
- D. See the Drawings for trees adjacent to the buildings to be removed as part of this project.

1.02 RELATED WORK:

- A. Any trees and shrubs specifically designated by the Owner not to be cut, removed, destroyed, or trimmed shall be saved from harm and injury in accordance with Section 01 57 19 – ENVIRONMENTAL PROTECTION.

PART 2 – PRODUCTS

Not Applicable.

PART 3 - EXECUTION

3.01 RIGHT TO WOOD AND LOGS:

- A. The Owner shall have the right to cut and remove logs and other wood of value in advance of the Contractor's operations. All remaining logs and other wood to be removed in the course of clearing shall become the property of the Contractor.

3.02 CLEARING:

- A. Unless otherwise indicated, the Contractor shall cut or otherwise remove all trees, saplings, brush and vines, windfalls, logs and trees lying on the ground, dead trees and stubs more than 1-foot high above the ground surface (but not their stumps), trees which have been partially uprooted by natural or other causes (including their stumps), and other vegetable matter such as shags, sawdust, bark, refuse, and similar materials within the limit of work.
- B. Trees, stumps, and stubs to be cleared shall be cut as close to the ground as practicable but not more than 6-inches above the ground surface in the case of small trees, and 12-inches in the case of large trees. Saplings, brush and vines shall be cut close to the ground.

3.03 GRUBBING:

- A. Unless otherwise indicated, the Contractor shall completely remove all stumps and roots to a depth of 18-inches, or if the Contractor elects to grind the stumps, they shall be ground to a

minimum depth of 6-inches. The Contractor shall remove all soils from rootballs prior to off-site disposal.

3.04 DISPOSAL:

- A. All material collected in the course of the clearing and grubbing, which is not to remain, shall be disposed of in a satisfactory manner away from the site or as otherwise approved. Such disposal shall be carried on as promptly as possible and shall not be left until the final clean-up period.

END OF SECTION

SECTION 31 50 00
SUPPORT OF EXCAVATION

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. This section of the specification covers sheeting and bracing for support of excavations. The requirements of this section shall also apply, as appropriate, to other methods of excavation support and underpinning which the Contractor elects to use to complete the work.
- B. This section of the specification covers support of excavation methods, including, but not limited to: excavation sidewall stepping/sloping, wood and steel sheeting and bracing for support of excavations. The requirements of this section shall also apply, as appropriate, to other methods of excavation support and underpinning which the Contractor elects to use to complete the work.
- C. The Contractor shall furnish and place sheeting of the kinds and dimensions required, complying with these specifications, where indicated on the drawings or ordered by the Engineer.

1.02 RELATED WORK:

- A. Section 02 41 13.36 – UTILITY ABANDONMENT
- B. Section 31 00 00 - EARTHWORK.

1.03 QUALITY ASSURANCE:

- A. This project is subject to the Safety and Health regulations of the U.S. Department of Labor set forth in 29 CFR, Part 1926, and to the New Hampshire Department of Labor "Safety & Health of Employees (1403.19)". Contractors shall be familiar with the requirements of these regulations.
- B. The excavation support system shall be of sufficient strength and be provided with adequate bracing to support all loads to which it will be subjected. The excavation support system shall be designed to prevent any movement of earth that would diminish the width of the excavation or damage or endanger adjacent structures.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Timber sheeting shall be sound spruce, pine, or hemlock, planed on one side and either tongue and grooved or splined. Timber sheeting shall not be less than nominal 2 inches thick.
- B. Steel for sheeting shall be mild steel with appropriate cross section and material properties for the intended use, and free of rust, soil, contaminants, and debris of any kind.
- C. Timber and steel used for bracing shall be of such size and strength as required in the excavation support design. Timber or steel used for bracing shall be new or undamaged used material which does not contain splices, cutouts, patches, or other alterations which would impair its integrity or strength.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Work shall not be started until all materials and equipment necessary for their construction are either on the site of the work or satisfactorily available for immediate use as required.

- B. The sheeting shall be securely and satisfactorily braced to withstand all pressures to which it may be subjected.
- C. The sheeting shall be driven by approved means to the design elevation. No sheeting may be left so as to create a possible hazard to safety of the public or a hindrance to traffic of any kind.
- D. If boulders or very dense soils are encountered, making it impractical to drive a section to the desired depth, the section shall, as required, be cut off.
- E. The sheeting shall be left in place where indicated on the drawings or ordered by the Engineer in writing. At all other locations, the sheeting may be left in place or salvaged at the option of the Contractor. Steel or wood sheeting permanently left in place shall be cut off at a depth of not less than two feet below finish grade unless otherwise required.
- F. All cut-off will become the property of the Contractor and shall be removed by him from the site.
- G. Responsibility for the satisfactory construction and maintenance of the excavation support system, complete in place, shall rest with the Contractor. Any work done, including incidental construction, which is not acceptable for the intended purpose shall be either repaired or removed and reconstructed by the Contractor at his expense.
- H. The Contractor shall be solely responsible for repairing all damage associated with installation, performance, and removal of the excavation support system.

END OF SECTION

**SECTION 33 01 30.16
TELEVISION INSPECTION OF PIPELINES**

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. Prior to any performing any work on the site, the Contractor shall furnish all materials, tools, labor and equipment necessary to visually inspect and locate by means of a closed-circuit television the gravity sewer service(s) that connect from the building to the sewer main. All sewer manholes on-site shall be inspected throughout their entire length to determine the connection(s) to the main.
- B. Once service(s) are identified, the Contractor shall disconnect the sewer service in accordance with Section 02 41 13.36 - Utility Abandonment. Prior to disconnection, the Contractor shall coordinate with the Town of Jaffrey water division.

1.02 RELATED WORK:

- A. Section 02 41 13.36, UTILITY ABANDONMENT
- B. Section 01 33 23, SUBMITTALS

1.03 QUALITY ASSURANCE:

- A. The work described herein shall be performed by a company with not less than five years of experience in providing the required services, employing experienced workers and experienced supervisory personnel. Supervisory personnel shall have not less than three years of experience in providing the required services and shall be present at the jobsite during all work related to the required services.

1.04 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF SECTION 01 33 23 SUBMITTALS, SUBMIT THE FOLLOWING:

- A. Prior to beginning work, submit the following:
 - 1. Qualifications of the firm/personnel who will perform the work;
 - 2. Description of system proposed for handling existing flows during the various procedures to be carried out;
 - 3. Description of the system and equipment proposed for televising the pipe.

PART 2 - PRODUCTS

2.01 EQUIPMENT:

- A. Video system capable of producing external hard drives in MPEG-4 (.mp4) format with audio.
- B. The television camera used for the inspection shall be a pan and tilt closed circuit color television camera specifically designed and constructed for such inspections. Lighting for the camera shall be suitable to allow a clear picture for the entire periphery of the pipe. The camera shall be operative in 100 percent humidity conditions. The camera, television monitor and other components of the video system shall be capable of producing a minimum 400-line resolution color video picture. Picture quality and definition shall be to the satisfaction of the Engineer and,

if unsatisfactory, equipment shall be removed and no payment made for the unsatisfactory inspection.

PART 3 - EXECUTION

3.01 INSPECTION:

- A. The inspection shall be done one manhole section at a time and the section being inspected shall be suitably isolated from the remainder of the sewer line as required. No sanitary sewer lines shall be inspected until they have been cleaned. The camera shall be moved through the line in either direction at a uniform slow rate, stopping when necessary to ensure proper documentation of the sewer's condition, but in no case will the television camera be pulled at a speed greater than 30 feet per minute.
- B. Manual winches, power winches, TV cable and powered rewinds or other devices that do not obstruct the camera view or interfere with proper documentation of the sewer conditions shall be used to move the camera through the sewer line. If, during the inspection operation, the television camera will not pass through the entire manhole section, the Contractor shall reset up his equipment in a manner so that the inspection can be performed from the opposite manhole. The Contractor is required to repeat the TV inspection of areas repaired subsequent to the original TV inspection.
- C. Whenever nonremote powered and controlled winches are used to pull the television camera through the line, telephones or other suitable means of communication shall be set up between the two winches, the pumping unit and the monitor control.
- D. Measurement for location of defects shall be at the ground level by means of a meter device. Marking on cable, or the like, which would require interpolation for depth of manhole, will not be allowed. Measurement meters will be accurate to 0.2 feet. A measuring target (or the sealing packer) in front of the television shall be used as an exact measurement reference point, and the meter reading shall show this exact location of the measurement reference point.

3.02 DOCUMENTATION:

- A. Documentation shall be provided for all sewer reaches as described in Section 01 33 19 of these specifications.
- B. The Contractor shall furnish printed internal inspection logs and two (2) external hard drives of the entire inspection to the Owner on completion.

END OF SECTION

Weston & Sampson Engineers, Inc.
BID
January 15, 2025

Town of Jaffrey
Abatement and Demolition of Former W.W. Cross Property
IFB #2025-1

Appendix A – Hazardous Building Materials Inventory (Ransom, 2017)

**DES Waste Management Division
29 Hazen Drive; PO Box 95
Concord, NH 03302-0095**

HAZARDOUS BUILDING MATERIALS INVENTORY

Former W. W. Cross Property
39 Webster Street
Jaffrey, New Hampshire

NH DES Site #: 198708007

Project Type: Unsolicited Site Assessment

Project Number: 37735

Prepared For:

Southwest Region Planning Commission
37 Ashuelot Street
Keene, New Hampshire 03431
603.357.0557
J.B. Mack
jbmack@swrpc.org

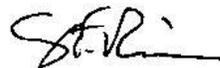
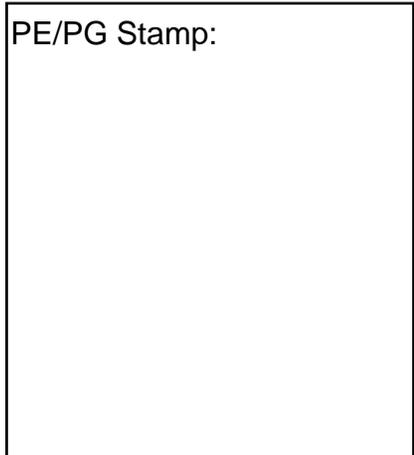
Prepared By:

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Steven F. Rickerich, P.G.
Vice President

September 22, 2017

PE/PG Stamp:



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September 22, 2017

Project 141.05051.010.02

Mr. J. B. Mack
SWRPC Brownfields Program Manager
Southwest Region Planning Commission
37 Ashuelot Street
Keene, New Hampshire 03431

Re: Hazardous Building Materials Inventory, Rev. 1
Former W.W. Cross Property
39 Webster Street
Jaffrey, New Hampshire

Dear Mr. Mack:

Ransom Consulting, Inc. (Ransom) has prepared this letter report presenting the results of the Hazardous Building Materials Inventory (HBMI) performed at the above-referenced property (the Site). The work was funded by a U.S. Environmental Protection Agency (U.S. EPA) Brownfields assessment grant awarded to Southwest Region Planning Commission (SWRPC). The work was authorized by SWRPC as part of environmental due diligence prior to the proposed site redevelopment, and this report has been prepared for SWRPC in accordance with our approved and fully executed Site-Specific Quality Assurance Project Plan (SSQAPP) dated June 15, 2017. The HBMI included sampling for asbestos-containing materials (ACM), a survey of lead-based paint (LBP), field screening and sampling of surficial soils, sampling for polychlorinated biphenyl (PCB)-containing building materials, and an evaluation of universal wastes.

Generalized floor plans for the Site building, including locations of samples testing positive for asbestos, are provided in Figures 1 through 3. An exterior Site plan showing soil screening/sampling locations is provided as Figure 4. A photograph log documenting our key findings is included as Attachment A.

EXECUTIVE SUMMARY

SWRPC has requested this HBMI to identify hazardous materials in advance of potential future Site redevelopment, which may include demolition and/or renovation of the Site building for beneficial re-use of the Site. Given the age and construction of the Site building, there is potential for ACM, LBP, and/or PCBs to be present in the building materials. To address these concerns, Ransom conducted an inspection for the presence of these materials, as well as an inventory of other potentially hazardous materials at the Site during the HBMI conducted June 26, 2017 thru June 28, 2017. Based on the results of our inspection, Ransom draws the following conclusions:

1. ACMs were identified at the Site building. Materials identified as ACM that may be impacted by the proposed redevelopment should be properly removed and disposed, prior to demolition or renovation activities that would impact them;
2. Some of the materials inspected were coated with lead in paint at concentrations that define the materials as “lead-based” according to U.S. Department of Housing and Urban Development (HUD) guidelines. These guidelines apply to federal housing projects and are referenced for comparison purposes only; HUD compliance is not a regulatory consideration in this re-use scenario. Facility maintenance staff or redevelopment contractors may perform maintenance, renovation, or demolition on surfaces coated with LBP or lead-containing coatings, provided that the handling of components coated with paint containing lead *at any concentration* (referred to as lead-containing paint) complies with Occupational Safety and Health Administration’s (OSHA) lead standards;
3. Elevated lead concentrations were detected during field-screening and laboratory analysis of surficial soils tested from the “drip zone” around the Site building perimeter. The presence of lead in soils at the Site is inferred to be a result of flaking and deposition of LBP from the Site building exterior. Three soil samples submitted for laboratory analysis had detected concentrations of lead in excess of the New Hampshire Department of Health and Human Services (NH DHHS) standards, which apply specifically to areas of bare soils at residences and/or child care facilities; however, these NH DHHS criteria do not describe recent or proposed conditions of land use at the Site. Nevertheless, measures to mitigate possible future exposures to Site soils are advised, and excavated soils that are contaminated above regulatory standards should be properly characterized, managed, and disposed of in accordance with the New Hampshire Solid Waste Rules and/or Hazardous Waste Rules, as appropriate;
4. No PCB bulk product waste (i.e., building materials containing PCBs at concentrations equal to or greater than 50 milligrams per kilogram (mg/kg) under 40 CFR 761) was identified in the building materials tested. Therefore, no regulated wastes or remedial action relative to PCBs in building materials are identified at this time; and
5. Ransom inventoried items at the Site during the course of this investigation that may contain PCBs, mercury, heavy metals, and/or ozone depleting substances (ODS), which are typically treated as universal wastes. Disposal of each of these items is also subject to hazardous and/or universal waste disposal requirements.

FACILITY DESCRIPTION

The Site is located at 39 Webster Road in the Town of Jaffrey, New Hampshire; and is currently developed with a vacant 100,810 square foot commercial/industrial building (the “Site building”). The Site building was constructed circa 1915 as the W. W. Cross Factory, a manufacturer of tacks and fasteners; several additions have been added to the original building from circa 1930 to circa 1970. The Site building is a mostly steel framed structure with exterior concrete block construction, though some sections are wood-framed. The Site building is constructed on a concrete slab-on-grade foundation; there

J. B. Mack
Southwest Region Planning Commission

are no basements, however, a small vent located in the concrete foundation wall of the office area appears to indicate the presence of an inaccessible crawl space beneath the former office area on the central southern section of the structure. Ransom did not enter the interior of this inaccessible crawl space. The Site building has several separate roof systems; all are flat, however approximately two-thirds of the Site building roof is equipped with “saw tooth” style skylights which provide exterior light to the majority of the former manufacturing spaces.

A majority of the Site building is comprised of former warehouse and manufacturing areas/rooms, located in the western and north-central portions of the building. The former office area comprises approximately 5,000 square feet in the south-central portion of the structure. A former boiler room and boiler maintenance room are located in the southwest corner of the Site building; however, the boilers have been removed.

Former warehouse/manufacturing space on the easterly portion of the Site building was converted to several separate tenant-occupied spaces by the current Site owner circa 2008. The converted units have individual propane-fired furnaces and individual electrical supply for each unit, with each unit equipped with an interior transformer. Currently the Site building is unheated and unoccupied. Dating back to circa 2012 there have been no active business operations at the Site, and the Site building has fallen into a state of disrepair.

A separate 14 ft. x 36 ft. structure abuts the Site building to the west and houses a 20,000-gallon No. 6 oil aboveground storage tank (AST). This AST bunker is of concrete block construction, has a concrete slab on grade foundation, and a flat roof system. The AST bunker appears to be filled with loose vermiculite insulation, in interior spaces not occupied by the AST.

A prospective purchaser is interested in acquiring the western portion of the parcel, after subdivision of the lot and demolition of the Site building. Completion of the HBMI will help stakeholders in decision making associated with the proposed redevelopment of this portion of the Site.

LIMITATIONS

This HBMI is subject to certain limitations, which must be considered when interpreting the results. The information presented in this report is based upon work undertaken by trained professional and technical staff in accordance with generally accepted engineering and scientific practices current at the time the work was performed. Conclusions represent the professional judgment of Ransom based on the data obtained from the work and the site conditions encountered at the time the work was performed and are not to be construed as legal advice.

In addition to these general stipulations, additional site-specific limitations are as follows:

1. Our survey was conducted utilizing limited destructive inspection and sampling techniques. Limited additional suspect materials may be present in concealed or inaccessible spaces, including wall and ceiling cavities, unidentified subflooring layers, etc., which may be disturbed as part of the proposed renovation. Ransom makes no conclusions about areas not accessed or observed during our inspection.

J. B. Mack
Southwest Region Planning Commission

2. Our inspection was conducted on behalf of SWRPC and the Town of Jaffrey, and is representative of conditions observed at the time of this report. No reliance shall be made by other users, for additional purposes, without written consent from Ransom.

HISTORICAL DOCUMENTATION

Ransom did not identify, was not provided with, and has no knowledge of any additional prior reports documenting the presence, inspection for, or abatement of hazardous materials at the Site.

ASBESTOS-CONTAINING MATERIALS

Ransom conducted an inspection of the Site for the presence of ACM June 26 thru June 28, 2017. The scope of the ACM inspection included the identification and quantification of accessible suspect building materials on the building interiors and exteriors. The inspection was conducted by Ms. Bonnie Best and Mr. Lucas Hathaway of Ransom, who are accredited by the U.S. EPA as asbestos inspectors. A copy of Ms. Best's and Mr. Hathaway's most recent training certificates are provided as Attachment B.

Ransom was assisted by Roof Management Consultants Inc. (Roof Management) of Wrentham, Massachusetts in the sampling of suspect ACM on the roof and the subsequent patching of roof sample locations. A copy of Roof Management's report is provided in Attachment C. Roof Management core cut numbers and the corresponding Ransom sample identification numbers are listed in Table 1.

In the State of New Hampshire, OSHA, the U.S. EPA, and the New Hampshire Department of Environmental Services (NH DES) are responsible for regulating the release of asbestos into the environment and protecting workers from exposure to airborne asbestos fibers. OSHA defines ACM as "any material containing more than one percent asbestos." NH DES defines ACM as "any material that contains any type of asbestos in an amount greater than one percent by weight, area, or volume, either alone or mixed with other fibrous or non-fibrous materials." Bulk samples of suspect ACM were analyzed using the *Method for the Determination of Asbestos in Bulk Building Materials*, EPA/600/R-93/116 (1993) via polarized light microscopy (PLM) visual estimation.

Samples were analyzed by Optimum Analytical and Consulting, LLC (Optimum) of Salem, New Hampshire. Optimum is certified to perform bulk sample analysis by the National Voluntary Laboratory Accreditation Program (NVLAP). Copies of Optimum's relevant certifications are provided as Attachment B. Laboratory analysis of bulk samples identified ACM on site.

The following is a brief discussion of each ACM identified.

1. **Several mastics associated with current and historic floor coverings/stair treads were identified in several areas/rooms of the Site building (see details in Table 2 and on Figure 1):** ACM Mastic was identified in the bathroom within Site building room 22, on concrete flooring; ACM residual mixed mastics were identified beneath the carpeting in the original office area; and ACM mastic was identified in association with the vinyl stair treads in the main entryway to the former office area. Neither the floor tiles nor the

vinyl stair treads were identified as containing ACM. The ACM mastics beneath the carpeting appears to have been associated with previously removed flooring tiles; the carpet adhesive tested negative for asbestos.

2. **Window glaze (sample sets 31 and 55):** ACM Window glaze was identified in association with select windows in limited areas of the Site building. Interior and exterior ACM glazing was identified in association with the large metal sash windows located in the original office area; and an interior ACM glazing was identified in association with the large metal sash windows in Site building room 17. Additional metal sash windows with window glaze were identified in select rooms and in association with the numerous “saw tooth” skylights located throughout the former manufacturing areas; however, these window glaze samples from these units did not test positive for asbestos. See Table 2 and Figures 1 & 2 for additional details.
3. **9-inch floor tiles (sample sets 43, 44, and 50):** ACM 9-inch floor tiles were identified in the bathroom and office within Site Building Room 4, and in the bathroom within Site Building Room 2. Asbestos was not identified in the mastics associated with these 9-inch floor tiles. Additional 9-inch floor tiles were identified in the Site building which did not test positive for asbestos. See Table 2 and Figure 1 for additional details.
4. **Caulk, boiler room addition (sample sets 60 and 61):** Two ACM caulk materials were identified, both associated with the exterior of the boiler room. An ACM caulk was identified between the masonry and the two overhead doors leading to the boiler room; a second ACM caulk was identified between masonry associated with the concrete ramp and the concrete slab foundation (at the overhead doors). See Table 2 and Figure 2 for additional details.
5. **Vermiculite, AST bunker (sample set 62):** Asbestos (Tremolite) was identified as being present within the vermiculite sample analyzed by the laboratory. Although vermiculite is not an asbestos form mineral, areas where vermiculite has historically been mined have been associated with coexisting deposits of asbestos. Currently there is not an approved analytical methodology to reliably confirm vermiculite as non-asbestos containing; therefore, the U.S. EPA recommends that all vermiculite be treated as asbestos containing. Asbestos fiber was noted to be present in the sample collected (analyzed on a present/absent basis) and the identified vermiculite should be treated as ACM.
6. **Roofing materials (multiple sample sets, see Table 1 and Figure 3):** Several ACM roofing materials were identified across several of the roofing systems. In general, the ACM was limited to perimeter, penetration, and saw tooth flashings, though the shallow sloping side of each of the “saw tooth” units was also identified as being covered in ACM roofing. See Table 2 and Figure 3 for additional details.

A listing of all samples collected, analytical results, and estimated quantities of confirmed ACM can be found in Table 2. A copy of the laboratory analytical report can be found as Attachment D.

J. B. Mack
Southwest Region Planning Commission

Asbestos fibers present potential health hazards when they become airborne. Federal regulations suggest that ACM may be managed in place as long as materials remains intact, undamaged, and in good condition. Current regulations require that asbestos-containing building materials be removed if they will be disturbed by demolition, renovation, or other building maintenance activities. ACM abatement should be performed using approved methods in accordance with applicable federal and state regulations. ACM should be removed by a licensed asbestos abatement contractor, in accordance with a project design prepared by a certified asbestos abatement project designer, and disposed of in a facility licensed to accept asbestos-containing waste.

LEAD-BASED PAINT

Ransom engaged Titan Lead Testing, LLC of Melrose, Massachusetts (Titan) to conduct an inspection for LBP. Titan's LBP survey was conducted using a direct-reading hand-held X-ray Fluorescence (XRF) analyzer manufactured by Heuresis Corp. The inspection included readings collected from several substrates, including wood, metal, concrete, plaster, and gypsum wallboard. Titan obtained a total of 331 XRF readings from various building components and surfaces at the Site. The XRF results document concentrations of lead on the tested painted surfaces from less than 0.10 milligram per square centimeter (mg/cm^2) (lower limit of quantification of the XRF) and $16.0 \text{ mg}/\text{cm}^2$. Testing results can be found in Titan's lead inspection report, which is provided in Attachment C.

Please note that the LBP inspection conducted during this HBMI does not constitute a U.S. EPA/HUD-compliant lead survey.

HUD has established a standard for characterizing LBP as any paint containing $1.0 \text{ mg}/\text{cm}^2$ lead, as tested using an XRF analyzer, or 0.5 percent lead by weight for paint chips. These materials are considered to be "lead-based paint" according to Section 1017 of the *Residential Lead-Based Paint Hazard Reduction Act of 1992* (also referred to as Title X). HUD LBP guidelines only apply to housing funded by the federal government. While they are not regulatory considerations in commercial applications, these guidelines are a useful reference for assessing hazards associated with lead in paint in non-residential settings. When paint contains lead in concentrations greater than $1.0 \text{ mg}/\text{cm}^2$ or 0.5 percent by weight, special care should be taken when conducting activities that impact this paint. When surfaces covered in paint containing lead *at any concentration* are impacted by abrasive blasting, torch burning, or similar activities that generate significant dust or fumes, hazardous airborne concentrations can be generated even if the lead content is below the HUD standard.

Handling of components coated with lead-containing paint *at any concentration* requires compliance with the OSHA lead standard (*Lead in Construction*, 29 CFR 1926.62). Under the existing conditions, facility maintenance staff or contractors may perform demolition, renovation, abatement, stabilization, cleanup, and daily operations in buildings that have LBP or lead-containing paint, provided that this regulatory requirement is met.

If select demolition of LBP-coated components is required as part of redevelopment the U.S. EPA, NH DES, and/or the waste receiving facility may require representative sampling of the debris to determine the quantity of lead that would be expected to leach into the environment if the debris were disposed of in a landfill. The representative sample(s) would be analyzed by Toxicity Characteristic

J. B. Mack
Southwest Region Planning Commission

Leaching Procedure (TCLP). If concentrations are 5 milligrams per liter (mg/l) or greater, the debris must be disposed of as hazardous waste. If concentrations are less than 5 mg/l, the debris is not regulated as a hazardous waste and materials may be disposed of as general construction debris. To minimize the total volume of hazardous waste (if present), segregating hazardous from non-hazardous waste may be advisable.

SURFICIAL SOIL SCREENING AND LABORATORY TESTING

Titan performed field screening and Ransom, in coordination with Titan, collected laboratory samples of surficial soils from the Site building “drip zone”, in order to assess for potential impacts to Site soils from the historic flaking and deposition of LBP. Soils at 57 locations adjacent to the building drip-edge were screened for the presence of lead using a hand-held X-ray fluorescent analyzer. Soils at a depth of 0.5 to 1 inch below grades were scraped of leaf-cover and surface vegetation and spot locations were screened in situ. Asphalt-pavement abuts large portions of the Site building to the east, south, and west; soil screening was limited to bare ground and/or vegetated areas. Soil located beneath asphalt paving was not screened.

Lead field screening results ranged from less than 10 mg/kg (equivalent to parts per million) to 1,728 mg/kg. Six soil samples and one duplicate sample were collected from six locations adjacent to the building, in areas with the highest readings during the XRF in situ screening. The soil samples were collected at a depth interval ranging from 0.5 to 2 inches and were submitted to the laboratory for analysis for total lead. The samples were collected into laboratory-supplied glassware, and delivered under chain-of-custody documentation to Alpha Analytical laboratory of Westborough, Massachusetts (Alpha) for total lead analysis, via U.S. EPA Method 6010C. One duplicate sample was also collected and submitted for analysis, for Quality Assurance/Quality Control (QA/QC) purposes. For the samples analyzed at the laboratory, the detected concentrations of lead ranged from 29.9 mg/kg to 1,750 mg/kg.

Three of the six soil samples collected and analyzed at the laboratory (samples SS104, SS105, and SS106) had detected lead concentrations in excess of NH DES Env-Or 600 Soil Remediation Standards (SRS) of 400 mg/kg; and/or in excess of the NH DHHS He-P1600 Interim Control Measure standards for bare soil areas (greater than 9 square feet) of 400 mg/kg in play areas (three samples), and 1,200 mg/kg for the rest of the yard (one sample) for lead. However, the Env-Or 600 standards are not interpreted to be directly applicable to the occurrence of lead at the Site because the presence of lead in the soil samples is not inferred to be due to improper waste disposal, nor is it likely related to a regulated discharge of hazardous substances to Site soils. The presence of lead in soils at the Site is likely associated with the past normal use of LBP, applied to the Site building exterior. In addition, the NH DHHS standards apply to bare soils with an area greater than 9 square feet at a dwelling, dwelling unit, and/or child care facilities, which does not describe recent or current Site conditions or land use. None of the sampled areas with elevated lead concentrations were documented to be comprised of bare (i.e., unvegetated) soils with an area of greater than 9 square feet.

Nevertheless, measures to mitigate possible future exposures to Site soils with elevated lead content are advised, including one or more of the following: maintenance of appropriate vegetative cover, capping of soils, or the removal and replacement of near-surface soils consistent with the general protocols outlined in He-P 1600. Excavated soils that are impacted by the presence of lead above regulatory standards

J. B. Mack
Southwest Region Planning Commission

should be properly characterized, managed, and disposed of in accordance with the New Hampshire Solid Waste Rules and/or Hazardous Waste Rules, as appropriate.

Complete XRF soil screening results can be found in Titan's lead inspection report, which is provided in Attachment C. Laboratory surficial soil testing results can be found in Table 3, and the laboratory analytical data sheets are included in Attachment D.

POLYCHLORINATED BIPHENYLS IN BUILDING MATERIALS

PCBs may be present in building materials (including caulking, glazing, adhesives, and paints) in buildings constructed between 1950 and 1978, particularly in schools and other institutional buildings. Buildings constructed prior to 1950 may also have PCB-containing building products as a result of renovation projects that may have occurred between 1950 and 1978. PCB-containing building products are considered *PCB bulk product waste* by the U.S. EPA, if the concentration of PCBs in the material is greater than or equal to 50 mg/kg. Building materials with PCB concentrations ≥ 50 mg/kg are not authorized for use under *Part 761—Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions* and must be managed accordingly.

The definition of PCB bulk product waste also includes building materials that have been coated or serviced with PCBs. Masonry, wood, metals, and other building materials that are purposely coated with PCB-containing products are regulated as PCB bulk product waste, if the product coating the building materials contains PCBs at concentrations ≥ 50 mg/kg and subsequently the building materials have concentrations ≥ 50 mg/kg as a result of leaching into the substrate.

To evaluate the potential presence of PCBs in building materials, Ransom collected five bulk samples of various caulk and paints from the Site building for laboratory analysis. One duplicate sample was also submitted, for quality assurance/quality control purposes. The samples were placed in laboratory-supplied glassware, and delivered under chain-of-custody to Alpha for PCB analysis via U.S. EPA Method 8082A and Soxhlet extraction U.S. EPA Method 3540C.

None of the samples had concentrations of PCBs above the U.S. EPA regulatory standard. Two samples submitted for analysis did not exhibit PCB concentrations above laboratory reporting limits. The laboratory reporting limits were all well below the applicable standard. Three of the samples had concentrations above laboratory reporting limits, but well below the U.S. EPA regulatory standard. Therefore, no caulk or paints applied at the Site building were identified as an unauthorized PCB use under U.S. EPA regulations (i.e., PCB products with concentrations equal to or above 50 mg/kg). Based on the analytical results, these building materials are, therefore, not a regulated waste and are exempt under 40 CFR 761, and no remedial actions regarding PCBs in building materials is required at this time.

Laboratory results from PCB testing are provided in Table 4, and the analytical data sheets are included in Attachment D. Additional PCB building components potentially containing PCBs (i.e. fluorescent light ballasts) are discussed in the section below.

OTHER HAZARDOUS AND POTENTIALLY HAZARDOUS MATERIALS

Polychlorinated Biphenyls

PCB-containing oil is sometimes found in compressor and hydraulics fluids, and the dielectric fluid of older electrical transformers and the capacitors associated with older fluorescent light ballasts. Although electrical equipment is currently required to be properly labeled indicating the presence or absence of PCBs, this has not always been the case. Ransom observed a total of 697 light ballasts and four pad-mounted transformers inside the Site building, which may have PCB-containing dielectric fluid. The identified interior transformers are associated with the circa 2008 renovation of the southeasterly portion of the Site building. Given the date of these renovations and transformer installation PCBs are likely not associated with these transformers; however, Ransom did not identify specific “no PCB” labeling on the transformers. Three inactive older generation transformers were located on the south-central portion of the property, within the Groundwater Management Zone for the actively managed W. W. Cross Site. The units did have “No PCB” blue labels affixed to them, which indicated that the dielectric fluids were likely changed out in the past. Electrical fixtures light ballasts were not inspected for the presence of a “No PCBs” label due to electrical safety concerns. When a “No PCBs” label is not observed, Ransom must presume that those fluorescent light ballasts contain PCBs.

With the power service off/disconnected by a licensed electrician, Ransom recommends that ballasts be inspected for the “No PCBs” label prior to demolition or renovation activities. Fluorescent light ballasts without the “No PCBs” labels are presumed to contain PCBs and should be managed as hazardous waste and recycled or disposed of in accordance with applicable federal and state regulations.

Mercury-Containing Components

Mercury-containing components such as fluorescent light tubes and thermostat switches are classified as Universal Waste and are regulated by the U.S. EPA under 40 CFR Parts 260–273. The Universal Waste Rule provides streamlined management requirements tailored to several different kinds of waste. The types of waste covered by the Universal Waste Rule are frequently thrown in the trash by unregulated households and small businesses. Classifying an item as a Universal Waste provides flexibility for its proper management and can prevent the item from entering municipal waste streams. Instead, it can be readily collected and disposed of at a hazardous waste facility. Ransom observed a total of approximately 1,630 fluorescent light tubes and 16 thermostat switches that may contain mercury.

Components presumed to contain mercury should be removed and recycled in accordance with Universal Waste regulations prior to proposed redevelopment activities that may impact them.

Ozone-Depleting Substances

Certain compounds used in air conditioning and refrigeration equipment have been identified by the U.S. EPA as ODS due to their potential to accelerate the breakdown of stratospheric ozone. The U.S. EPA promulgated regulation 40 CFR 82 (*Protection of Stratospheric Ozone*) under Title VI of the Clean Air Act Amendments of 1990 (CAA), which includes the phase-out of production and importing of ODS in the U.S. Under Title VI of the CAA, the U.S. EPA established a schedule for phasing out most ODS by the year 2000, with the implementation of additional controls to minimize ODS emissions for the

J. B. Mack
Southwest Region Planning Commission

remaining materials. Ransom observed a total of two wall/window-mounted air-conditioning units, and five refrigeration units, that may contain ODS.

Before initiating demolition or renovation activities, the U.S. EPA recommends identifying refrigeration or air-conditioning equipment within a home or building, recovering the refrigerant, and either sending the refrigerant to a U.S. EPA-certified reclaimer, sending the refrigerant to a permitted destruction facility, or safely storing the refrigerant. Section 608 of the CAA prohibits the intentional venting of refrigerants into the atmosphere during the disposal of equipment, although the release of *de minimis* quantities during the process of making good faith efforts to comply with these regulations is not subject to penalty.

Heavy Metals

Ransom identified 27 emergency lighting systems/units that are typically powered by batteries containing various heavy metals. Ransom also observed 18 tube-type television sets with cathode-ray tubes. Components presumed to contain heavy metals should be removed and recycled in accordance with Universal Waste regulations prior to proposed redevelopment activities that may impact them.

An inventory of all other hazardous and potentially hazardous materials identified at the Site, typically managed as “universal” wastes, can be found in Table 6.

QUALITY ASSURANCE/QUALITY CONTROL

Bulk asbestos samples were analyzed by Optimum. Bulk caulking samples were analyzed for PCBs, and surficial soil samples were analyzed for lead, by Alpha. Alpha provided analysis and data according to standard operating protocols and laboratory data validation guidance included in Ransom’s SSQAPP for the W.W. Cross Property, Jaffrey, New Hampshire (RFA #17091, Addendum No. 2 Rev. 1 to the State of New Hampshire Brownfields Assessment Projects Generic Quality Assurance Project Plan).

Each lab provided the following information in analytical report:

1. Data results sheets;
2. Duplicate results/acceptance limits;
3. Description of analytical methods and results; and
4. Other pertinent results/limits as deemed appropriate.

As outlined in the SSQAPP and/or our Generic QAPP, at the completion of the field tasks and receipt of the analytical results, a data usability analysis was conducted to document the precision, bias, accuracy, representativeness, comparability, and completeness of the results. The following sections present this analysis.

Precision

Precision measures the reproducibility of measurements. The precision measurement is established using the relative percent difference (RPD) between the duplicate sample results. Duplicate samples of suspect ACM were submitted to the laboratory in accordance with U.S. EPA asbestos sampling requirements, which require minimum duplicate analysis of samples in order for a material to be deemed negative for asbestos. Bulk samples of 81 distinct suspect ACM were submitted for duplicate laboratory analysis, 60 of which tested negative for asbestos (60 samples and 60 duplicate samples). Duplicate samples of one suspect caulking were submitted to Alpha for PCB analysis. Neither the sample nor the duplicate contained concentrations of PCBs above laboratory reporting limits. The RPD between the caulk sample submitted (PCB-05) and its duplicate (PCB-DUP) was therefore not calculated. A duplicate sample of one of the six soil samples was submitted for total lead analysis. The RPD between the surface soil sample submitted (SS102) and its duplicate (SS-DUP) was calculated to be 11.7%, which is within the acceptable range of precision for duplicate samples. Calculation of RPD for the soil sample duplicate is provided in Table 5.

Bias

Bias is the systematic or persistent distortion of a measurement process that causes errors in one direction. Bias assessments are made using personnel, equipment, and spiking materials or reference materials, as independent as possible from those used in the calibration of the measurement system. Bias assessments are typically based on the analysis of spiked samples so that the effect of the matrix on recovery is incorporated into the assessment. A documented spiking protocol and consistency in following that protocol are important to obtaining meaningful data quality estimates.

Matrix spike and matrix spike duplicate samples (MS/MSD) are not required protocols of U.S. EPA Method 600, and were not employed during laboratory analysis for asbestos. Therefore, no determination of laboratory bias was assessed. MS/MSD samples for the PCB and lead analyses did not indicate laboratory bias.

Accuracy

Accuracy is a statistical measurement of correctness and includes components of random error (variability due to imprecision) and systemic error. It therefore reflects the total error associated with a measurement. A measurement is accurate when the value reported does not differ from the true value or known concentration of the spike or standard. For certain chemical analyses, surrogate compound recoveries are used to assess accuracy and method performance for each sample analyzed. Analysis of performance evaluation samples can provide additional information for assessing the accuracy of the analytical data being produced.

The lab provides a non-conformance summary that reports if all of the quality control criteria including initial calibration, calibration verification, surrogate recovery, holding time and method accuracy/precision for analysis were within acceptable limits. According to the laboratories, unless noted in the non-conformance summary, all of the quality control criteria for these analyses were within acceptable limits.

Representativeness

Objectives for representativeness are defined for each sampling and analysis task and are a function of the investigative objectives. Representativeness was accomplished during this project through use of standard field, sampling, and analytical procedures. All objectives for sampling and analytical representativeness, as specified in SSQAPP, were met.

Comparability

Comparability is the confidence with which one data set can be compared to another data set. The objective for this QA/QC program is to produce data with the greatest possible degree of comparability. Comparability was achieved by using standard methods for sampling and analysis, reporting data in standard units, normalizing results to standard conditions and using standard and comprehensive reporting formats. Complete field documentation was used, including standardized data collection forms to support the assessment of comparability. Historical comparability shall be achieved through consistent use of methods and documentation procedures throughout the project.

Completeness

Completeness is calculated by comparing the number of samples successfully analyzed to the number of samples collected. The goal for completeness is 95 percent. The completeness for this project was 100 percent, as there were no samples that could not be analyzed due to holding time violations, samples spilled or broken, or any other reason.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of this HBMI, Ransom makes the following conclusions and recommendations.

1. ACMs were identified at the Site. Materials identified as ACM that may be impacted by the proposed renovation/demolition should be properly removed prior to demolition or renovation activities;
2. Some of the materials inspected were coated with lead in paint at concentrations that define the materials as “lead-based” according to HUD guidelines. These guidelines apply to federal housing projects and are referenced for comparison purposes only; HUD compliance is not a regulatory consideration in this re-use scenario. Facility maintenance staff or redevelopment contractors may perform maintenance, renovation, or demolition on surfaces coated with LBP or lead-containing coatings, provided that the handling of components coated with paint containing lead *at any concentration* (referred to as lead-containing paint) complies with OSHA’s lead standards;
3. Elevated lead concentrations were detected during field-screening and laboratory analysis of surficial soils tested from the “drip zone” around the Site building perimeter. The presence of lead in soils at the Site is inferred to be a result of flaking and deposition of LBP from the Site building exterior. Three soil samples submitted for laboratory analysis

had detected concentrations of lead in excess of the NH DHHS standards, which apply specifically to areas of bare soils at residences and/or child care facilities; however, these NH DHHS criteria do not describe recent or proposed conditions of land use at the Site. Nevertheless, measures to mitigate possible future exposures to Site soils are advised, and excavated soils that are contaminated above regulatory standards should be properly characterized, managed, and disposed of in accordance with the New Hampshire Solid Waste Rules and/or Hazardous Waste Rules, as appropriate;

4. No PCB bulk product waste (i.e., building materials containing PCBs at concentrations equal to or greater than 50 mg/kg under 40 CFR 761) was identified in the building materials tested. Therefore, no regulated wastes or remedial action relative to PCBs in building materials are identified at this time; and
5. Ransom inventoried items at the Site during the course of this investigation that may contain PCBs, mercury, heavy metals, and ODS. Disposal of each of these items is also subject to hazardous and/or universal waste disposal requirements.

COST ESTIMATES

Based on the conditions observed during our investigation and industry standards in recent years, Ransom has provided estimates for the abatement of the identified ACMs as well as the removal of other hazardous and potentially materials identified on site. Cost estimates associated with materials or items presumed to contain asbestos, PCBs, or other hazardous materials may be eliminated if future testing indicates these materials are negative.

Cost estimates assume that all identified ACM will be abated, and all universal wastes removed, regardless of whether the building will be demolished or retained. If the building is to remain, then intact ACM and fixtures may be managed in place, and **may not require removal**, as long as they remain intact, undamaged, and in good condition.

Line-item cost estimates for these materials are provided in Tables 7, 8, and 9. **Ransom recommends that these tables be removed and retained prior to providing copies of this report to contractors to obtain competitive bids for this work.**

The cost estimates presented are not intended to be quotes for these services, rather engineering cost estimates for project planning purposes. Ransom recommends that competitive contractor bids be solicited for proper abatement and/or disposal of the identified hazardous materials.

J. B. Mack
Southwest Region Planning Commission

If you have any questions regarding the information in this report please do not hesitate to contact any of the undersigned.

Sincerely,

RANSOM CONSULTING, INC.



Lucas Hathaway
Hazardous Materials Specialist/Primary Review



Stephen J. Dyer, P.E.
Senior Project Manager



Steven F. Rickerich, P.G.
2017.09.26 08:52:21 -04'00'

Steven F. Rickerich, P.G.
Vice President, Senior Project Manager

BAB/LDH/SJD/SFR:jar
Attachments

TABLE 1: ROOFING CORE CUTS AND CORRESPONDING SAMPLE LOCATIONS

Hazardous Building Materials Inventory
W.W. Cross Property
39 Webster Street
Jaffrey, New Hampshire

Roof Management Core Cut Number ^[1]	Ransom Sample Number Identification Number	Description	Location
Core Cuts # 1 & 2	R-01A and R-01B	Roof field	Section 1
Core Cuts # 3 & 4	R-02A and R-02B	Perimeter flashing	Section 1
Core Cuts # 5 & 6	R-03A and R-03B	Penetration flashing	Section 1
Core Cuts #7 & 8	R-04A and R-04B	Roof field	Section 2
Core Cuts #9 & 10	R-05A and R-05B	Perimeter flashing	Section 2
Core Cuts #11 & 12	R-06A and R-06B	Penetration flashing	Section 2
Core Cuts #13 & 14	R-07A and R-07B	Roof field	Section 3
Core Cuts #15 & 16	R-08A and R-08B	Perimeter flashing	Section 3
Core Cuts #17 & 18	R-09A and R-09B	Penetration flashing	Section 3
Core Cuts # 19 & 20	R-10A and R-10B	Sawtooth flashing	Section 3
Core Cuts # 21 & 22	R-11A and R-11B	Sawtooth repair	Section 3
Core Cuts # 23 & 24	R-12A and R-12B	Skylight flashing	Section 3
Core Cuts # 25 & 26	R-13A and R-13B	Roof field	Section 4
Core Cuts # 27 & 28	R-14A and R-14B	Sawtooth field	Section 4
Core Cuts # 29 & 30	R-15A and R-15B	Roof field repair	Section 4
Core Cuts # 31 & 32	R-16A and R-16B	Roof field	Section 5
Core Cuts # 33 & 34	R-17A and R-17B	Penetration flashing	Section 5

NOTES:

1. Locations of core cuts are shown on Roof Management's Test Cuts Roof Plan, provided in Attachment D.
2. Samples testing positive for asbestos shown in bold.
3. Additional roof sample sets (R-18 and R-19) were collected by Ransom and did not involve core cut designations.

TABLE 2: SUMMARY OF ASBESTOS TESTING RESULTS

Hazardous Building Materials Inventory
 W.W. Cross Property
 39 Webster Street
 Jaffrey, New Hampshire

Material	Location	Sample Number	Asbestos Quantity and Type ^[2,4]	Estimated Quantity ^[3]
Interior and Exterior Samples				
Drywall	Gym Section	01A and 01B	NAD	
Joint Compound	Gym Section	02A and 02B	NAD	
4-inch Vinyl Cove Base	Gym Section	03A and 03B	NAD	
Adhesive	Gym Section	04A and 04B	NAD	
White 12-inch Floor Tile	Gym Offices	05A and 05B	NAD	
Residual Mixed Mastics	Gym Offices	06A and 06B	NAD	
2-ft X 4-ft Ceiling Tile (long fissure)	Gym Offices	07A and 07B	NAD	
9-inch White Floor Tile	Room 22 (Bath)	08A and 08B	NAD	
9-inch floor tile mastic	Room 22 (Bath)	09A	2% Chrysotile	75 SF
		09B	NA/PS	
2-ft X 2-ft Ceiling Tile	Office Area	10A and 10B	NAD	
4-inch Vinyl Cove Base	Office Area	11A and 11B	NAD	
Adhesive	Office Area	12A and 12B	NAD	
Residual Mixed Mastics	Office Area	13A	3% Chrysotile	720 SF
		13B	NA/PS	
12-inch Acoustic Ceiling Tile	Office Area	14A and 14B	NAD	
Glue Daubs	Office Area	15A and 15B	NAD	
Drywall	Office Area	16A and 16B	NAD	
Joint Compound	Office Area	17A and 17B	NAD	
12-inch Yellow Floor Tile	Office Area Baths	18A and 18B	NAD	
12-inch Blue Floor Tile	Office Area Baths	19A and 19B	NAD	
12-inch Floor Tile Mastic	Office Area Baths	20A and 20B	NAD	
Drywall	Locker Rooms	21A and 21B	NAD	
Joint Compound	Locker Rooms	22A and 22B	NAD	
Ceramic Tile Grout	Locker Rooms	23A and 23B	NAD	
Ceramic Tile Adhesive	Locker Rooms	24A and 24B	NAD	
Carpet Adhesive	Office Area	25A and 25B	NAD	
Interior Window Glaze (large windows)	Office Area	26A	3% Chrysotile	2 EA
		26B	NA/PS	
White 12-inch Floor Tile	Bath (off woodworking area Rm 20)	27A and 27B	NAD	
Mastic	Bath (off woodworking area Rm 20)	28A and 28B	NAD	
Vinyl Stair Tread	Office Area (Entryway)	29A and 29B	NAD	
Mastic (assoc. with vinyl stair tread)	Office Area (Entryway)	30A	2% Chrysotile	25 SF
		30B	NA/PS	
Window Glaze (Lg-Unit Steel Sash)	Room 17	31A	3% Chrysotile	2 EA
		31B	NA/PS	
12-inch Brown Floor Tile	Room 17	32A and 32B	NAD	
Mastic	Room 17	33A and 33B	NAD	
Drywall	Room 17 & East Abutting Room	34A and 34B	NAD	
Joint Compound	Room 17 & East Abutting Room	35A and 35B	NAD	
12-inch Gray Floor Tile	Room 16	36A and 36B	NAD	
Drywall	Room 15	37A and 37B	NAD	
Joint Compound	Room 15	38A and 38B	NAD	
Drywall	Room 6	39A and 39B	NAD	

TABLE 2: SUMMARY OF ASBESTOS TESTING RESULTS

Hazardous Building Materials Inventory
W.W. Cross Property
39 Webster Street
Jaffrey, New Hampshire

Material	Location	Sample Number	Asbestos Quantity and Type ^[2,4]	Estimated Quantity ^[3]
Joint Compound	Room 6	40A and 40B	NAD	
Plaster	Room 5	41A thru 41C	NAD	
Glue Daubs on Plaster	Room 5	42A and 42B	NAD	
9-inch Tan Floor Tile	Room 4 (Bath)	43A	5% Chrysotile	420 SF
		43B	NA/PS	
9-inch Green Floor Tile	Room 4 (Office)	44A	5% Chrysotile	240 SF
		44B	NA/PS	
9-inch Floor Tile Mastic	Room 4 (Bath, Office)	45A and 45B	NAD	
<i>NO SAMPLE SET</i>		46	N/A	
<i>NO SAMPLE SET</i>		47	N/A	
Skim Coat Plaster	Room 4 (Bath, Office)	48A and 48B	NAD	
Base Coat Plaster	Room 4 (Bath, Office)	49A and 49B	NAD	
9-inch Gray Floor Tile	Room 2 (Bath)	50A	5% Chrysotile	80 SF
		50B	NA/PS	
Mastic	Room 2 (Bath)	51 A and 51B	NAD	
Interior Window Glaze	Room 2	52A and 52B	NAD	
Interior Window Glaze	Room 1	53A and 53B	NAD	
Exterior Sky-Light Window Glaze	Exterior - Factory Space	54A and 54B	NAD	
Exterior Window Glaze (Lg units)	Exterior - Offices	55A	2% Chrysotile	6 EA
		55B	NA/PS	
Skim Coat	Exterior Masonry Walls - Original Const.	56A thru 56G	NAD	
Exterior Window Caulk (Sm units)	Exterior - Renovated Areas	57A and 57B	NAD	
Exterior Window Caulk (Lg units)	Exterior Gym Area	58A and 58B	NAD	
Yellow Mastic assoc. with Samples 36A/36B	Interior - Room 16	59A and 59B	NAD	
Black Caulking	Exterior Boiler Room	60A	8% Chrysotile	25 LF
		60B	NA/PS	
Caulking (overhead doors)	Exterior Boiler Room	61A	8% Chrysotile	80 LF
		61B	NA/PS	
Vermiculite Insulation	AST Bunker (interior)	62A	Tremolite Present	2,933 CF
		62B	NA/PS	
Fire Doors	Throughout	NA	PACM	13 EA
Roofing Material Samples				
Roof field	Section 1	R-01A and R-01B	NAD	
Wall flashing	Section 1	R-02A	18% Chrysotile	170 SF
		R-02B	NA/PS	
Penetration flashing	Section 1	R-03A	15% Chrysotile	50 SF (3 EA)
		R-03B	NA/PS	
Roof field	Section 2	R-04A and R-04B	NAD	
Perimeter flashing	Section 2	R-05A	8% Chrysotile	550 SF
		R-05B	NA/PS	
Penetration flashing	Section 2	R-06A	25% Chrysotile	16 SF (1 EA)
		R-06B	NA/PS	
Roof field	Section 3	R-07A and R-07B	NAD	
Perimeter flashing	Section 3	R-08A	5% Chrysotile	850 SF
		R-08B	NA/PS	

TABLE 2: SUMMARY OF ASBESTOS TESTING RESULTS

Hazardous Building Materials Inventory
W.W. Cross Property
39 Webster Street
Jaffrey, New Hampshire

Material	Location	Sample Number	Asbestos Quantity and Type ^[2,4]	Estimated Quantity ^[3]
Penetration flashing	Section 3	R-09A	8% Chrysotile	40 SF (4 EA)
		R-09B	NA/PS	
Sawtooth flashing	Section 3	R-10A	3% Chrysotile	19,000 SF
		R-10B	NA/PS	
Sawtooth repair	Section 3	R-11A and R-11B	NAD	
Skylight flashing	Section 3	R-12A	8% Chrysotile	60 SF (1 EA)
		R-12B	NA/PS	
Roof field	Section 4	R-13A and R-13B	NAD	
Sawtooth field	Sections 4&5	R-14A	18% Chrysotile	17,000 SF
		R-14B	NA/PS	
Roof field repair	Section 4	R-15A and R-15B	NAD	
Roof field	Section 5	R-16A and R-16B	NAD	
Curb flashing	Section 5	R-17A and R-17B	NAD	
Roof field	Fuel bunker	R-18A and R-18B	NAD	
Edge flashing	Fuel bunker	R-19A and R-19B	NAD	

NOTES:

1. Samples were collected on June 26 thru 28, 2017 by Ransom Consulting, Inc., and were analyzed by Optimum Analytical and Consulting, LLC of Salem, NH.
2. NA/PS = not analyzed/positive stop. Sample sets are analyzed until asbestos is identified in an amount greater than one percent.
3. CF = Cubic Feet. SF = Square Feet. LF = Linear Feet. EA = Each. NA = Not Applicable.
4. NAD = No asbestos detected; *PACM = Presumed Asbestos Containing Material.*
5. Vermiculite tested on present/absent basis, in accordance with U.S. EPA guidance. Volume presented calculated based on volume of AST vault, less volume of tank.
6. Samples shown in bold are ACM, samples shown in bold and italics are PACM.
7. NAD = no asbestos detected. N/A = not applicable.

TABLE 3: SOIL SAMPLE ANALYTICAL RESULTS

Hazardous Building Materials Inventory
 W.W. Cross Property
 39 Webster Street
 Jaffrey, New Hampshire

	NH DES Soil Remediation Standards (SRS)	NH DES RCMP Method 1 NH S-1 Standard	NH DES RCMP Method 1 NH S-2 Standard	NH DES RCMP Method 1 NH S-3 Standard	NH DHHS He-P 1600 Play Area (bare soils)	NH DHHS He-P 1600 Ave. for Yard (bare soils)	US EPA Regional Screening Levels (RSLs) for Soil		Sample ID Sample Location Sample Date	SS101 3' from W side of bld. 6/28/2017	SS102 2' from N side of bld. 6/28/2017	SS103 2' from N side of bld. 6/28/2017	SS104 2' from N side of bld. 6/28/2017	SS105 2' from N side of bld. 6/28/2017	SS106 2' from NE bld corner 6/28/2017	SS-DUP Duplicate of SS102 6/28/2017
							Residential	Industrial								
Metals	Concentrations in milligrams/kilogram						Concentrations in milligrams/kilogram									
Lead	400	400	400	400	400	1,200	400	800		2.54 J	29.7	178	458	797	1,730	33.4

NOTES:

- NH DES Env-Or 600 Soil Remediation Standards, updated June 1, 2015.
- NH DES Risk Characterization and Management Policy (RCMP) standards were updated February 2013.
- NH DHHS He-P 1600, updated September 1, 2011.
- U.S. EPA Regional Screening Levels, updated January 2015.
- Results in bold indicate sample exceeds NH DES S-1 soil standards; results in bold and italics indicate sample exceeds U.S. EPA Regional Screening Levels for industrial properties.

TABLE 4: PCB IN BUILDING MATERIAL ANALYTICAL RESULTS

Hazardous Building Materials Inventory
W.W. Cross Property
39 Webster Street
Jaffrey, New Hampshire

Sample Identification	Sample Location	Sample Matrix	Total PCBs (milligrams per kilogram [mg/kg])
PCB-01	Exterior Wall	Paint on masonry (red)	3.000 J
PCB-02	Exterior Window	Caulk	BRL (0.775-1.550)
PCB-03	Interior concrete floor; hallway between rooms 21 and 19.	Paint (multi-layered)	3.080
PCB-04	Interior metal support column; room 3	Paint (white)	1.470 J
PCB-05	Exterior; boiler room	Caulk (black)	BRL (0.299-0.599)
PCB-DUP	Blind duplicate of PCB-05	Caulk (black)	BRL (0.319-0.639)

NOTES:

1. Samples were collected on June 28, 2017 by Ransom Consulting, Inc. and were analyzed by Alpha Analytical of Westborough, Massachusetts.
2. BRL () = below reporting limit indicated in parentheses; J = approximate value due to low concentrations detected.
3. Values in **boldface** type indicate PCB concentrations which exceed a concentration of 50 mg/kg and are considered PCB Bulk Product Waste.

TABLE 5: SUMMARY OF DUPLICATE SAMPLE ANALYTICAL RESULTS

Hazardous Building Materials Inventory
 W.W. Cross Property
 39 Webster Street
 Jaffrey, New Hampshire

	NH DES Soil Remediation Standard	NH DES RCMP Method 1 NH S-1	NH DES RCMP Method 1 NH S-2	NH DES RCMP Method 1 NH S-3	NH DHHS He- P 1600 Play Area (bare soils)	NH DHHS He-P 1600 Ave. for Yard (bare	US EPA Regional Screening Levels (RSLs) for Soil		Sample ID	SS102	SS-DUP	Relative Percent Difference
							Residential	Industrial	Sample Location	6/28/2017	blind duplicate 6/28/2017	
Metals	Concentrations in milligrams/kilogram									Concentrations in milligrams/kilogram		%
Lead	400	400	400	400	400	1,200	400	800		29.7	33.4	11.7

NOTES:

1. NH DES Env-Or 600 Soil Remediation Standards, updated June 1, 2015.
2. NH DES Risk Characterization and Management Policy (RCMP) standards were updated February 2013.
3. NH DHHS He-P 1600, updated September 1, 2011.
4. U.S. EPA Regional Screening Levels, updated January 2015.
5. PCB analytical results for PCB-05 and the corresponding blind duplicate were below laboratory reporting limits; therefore, there are no calculations for RPD.

TABLE 6: INVENTORY OF OTHER HAZARDOUS/POTENTIALLY HAZARDOUS MATERIALS

Hazardous Building Materials Inventory
W.W. Cross Property
39 Webster Street
Jaffrey, New Hampshire

Component	Hazard	Location	Quantity
Transformers (pad-mounted, interior)	PCBs	Renovated area	4 EA
Fluorescent light ballasts	PCBs	Throughout	697 EA
Fluorescent light tubes	Mercury	Throughout	1,630 EA
Thermostat switches	Mercury	Throughout	16 EA
Batteries/emergency lights	Heavy Metals	Throughout	27 EA
Refrigerators/freezers/compressors	CFCs	Throughout	5 EA
Window mount AC units	CFCs	Industrial Area	2 EA
Cathode-ray tubes (televisions)	Heavy Metals	Throughout	18 EA

NOTES:

1. While our inspection did not identify unlabeled or suspect PCB-containing ballasts, it is recommended that each be inspected during renovation/demolition phase.
2. SF = square feet; EA = each

TABLE 7: REMOVAL COST ESTIMATES FOR ASBESTOS-CONTAINING MATERIALS

Hazardous Building Materials Inventory
W.W. Cross Property
39 Webster Street
Jaffrey, New Hampshire

Material	Quantity	Unit	Unit Cost	Total
Floor tile mastic and associated tiles	75	SF	\$6	\$450
Residual mixed mastics	720	SF	\$4	\$2,880
Interior window glaze	4	EA	\$250	\$1,000
Floor tread mastic and associated tread material	25	SF	\$20	\$500
9-inch floor tile	740	SF	\$4	\$2,960
Exterior window glaze	6	EA	\$150	\$900
Exterior caulking	105	LF	\$10	\$1,050
Overhead door caulking	80	LF	\$10	\$800
Roof penetration flashings (within negative roof fields)	9	EA	\$300	\$2,700
Perimeter flashings (associated with negative roof fields)	1,570	SF	\$6	\$9,420
Sawtooth skylight fields and flashings (within negative roof fields)	36,000	SF	\$4	\$144,000
Vermiculite insulation within AST vault	1	EA	\$3,000	\$3,000
<i>Fire doors</i>	13	EA	\$200	\$2,600
Confirmed/Presumed Asbestos Abatement Subtotal:				\$172,260
Contingency²:				34,500
Estimated Consultant Fee³:				10,000
TOTAL ESTIMATED ASBESTOS ABATEMENT COST:				\$216,760

NOTES:

1. SF = Square Feet; LF = Linear Feet; Each = Individual Unit
2. A contingency is added to cover potential hidden costs and market variability
3. A consultant fee is added to cover the costs of abatement design, oversight, and final air clearances.
4. Presumed asbestos-containing material (PACM) shown in italics.

TABLE 8: REMOVAL COST ESTIMATES FOR OTHER HAZARDOUS/POTENTIALLY HAZARDOUS MATERIALS

Hazardous Building Materials Inventory
 W.W. Cross Property
 39 Webster Street
 Jaffrey, New Hampshire

Material	Quantity	Units	Unit Cost	Total
Pad-mounted transformers (interior)	4	EA	250	\$1,000
Fluorescent light ballasts	697	EA	\$12	\$8,364
Fluorescent light tubes	1630	EA	\$4	\$6,520
Thermostat switches	16	EA	\$25	\$400
Batteries/emergency lights	27	EA	\$35	\$945
Refrigerator/freezer units	5	EA	\$100	\$500
Window-mounted AC units	2	EA	\$75	\$150
Total removal cost Subtotal:				\$17,879
Contingency:				\$3,550
TOTAL OTHER HAZARDOUS MATERIALS:				\$21,429

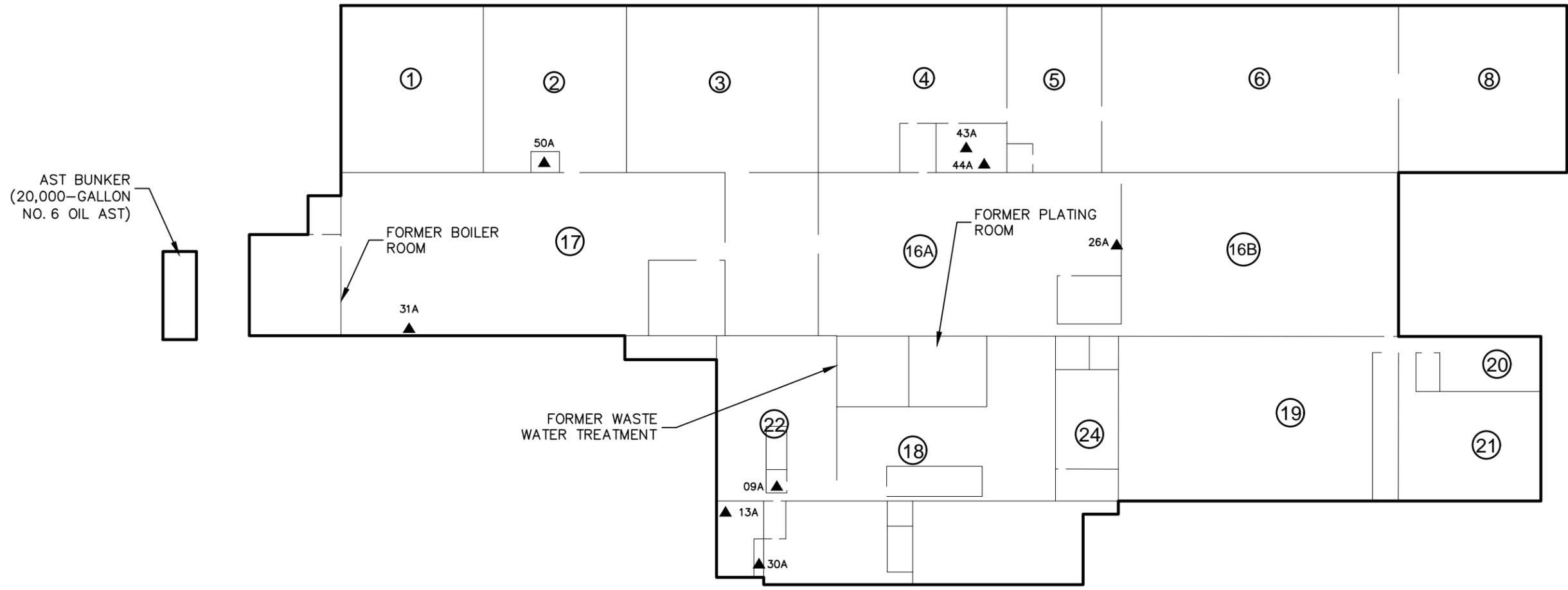
NOTES:

1. Cost estimates presented assume disposal of all fluorescent ballasts as PCB-containing. A cost savings may be achieved if some ballasts are determined to be non-PCB.
2. Contingency costs are added to cover potential hidden costs and market variability.
3. EA = Each; SF = Square Feet

TABLE 9: TOTAL REMOVAL COST ESTIMATES

Hazardous Building Materials Inventory
W.W. Cross Property
39 Webster Street
Jaffrey, New Hampshire

Materials	Estimated Removal Costs
Confirmed/presumed asbestos-containing materials	\$216,760
Other hazardous materials	\$21,429
TOTAL:	\$238,189

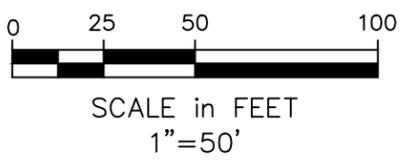


LEGEND:

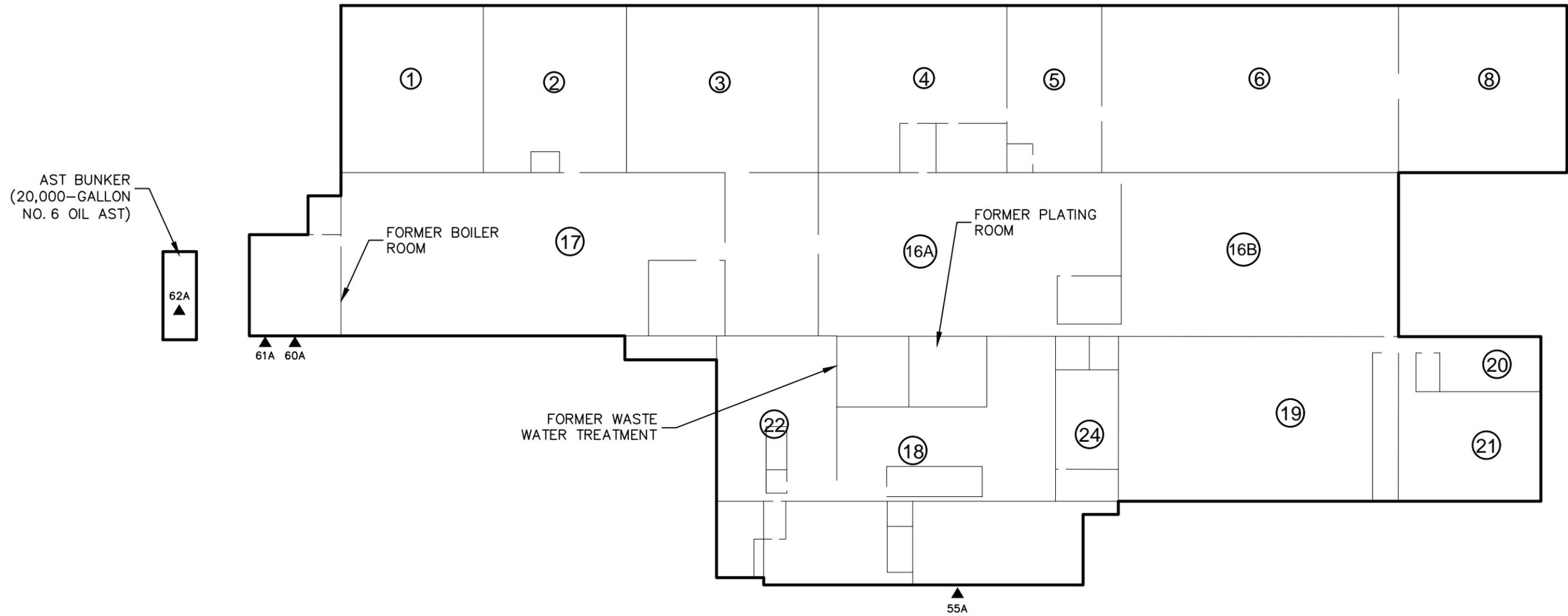
- ① ROOM NUMBER
- ▲ SAMPLE TESTING POSITIVE FOR ASBESTOS

NOTES:

1. SITE PLAN BASED ON MEASUREMENTS AND OBSERVATIONS MADE BY RANSOM CONSULTING, INC. ON JUNE 26-28, 2017.
2. SOME FEATURES ARE APPROXIMATE IN LOCATION AND SCALE.
3. THIS PLAN HAS BEEN PREPARED FOR SOUTHWEST REGION PLANNING COMMISSION. ALL OTHER USES ARE NOT AUTHORIZED, UNLESS WRITTEN PERMISSION IS OBTAINED FROM RANSOM CONSULTING, INC.



RANSOM Consulting, Inc.		INTERIOR PLAN
PREPARED FOR: SOUTHWEST REGION PLANNING COMMISSION 39 ASHUELOT STREET	SITE: W.W. CROSS PROPERTY 39 WEBSTER STREET JAFFREY, NEW HAMPSHIRE	
		DATE: SEPTEMBER 2017 PROJECT: 141.05051 FIGURE: 1

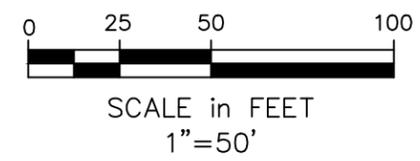


LEGEND:

- ① ROOM NUMBER
- 55A ▲ SAMPLE TESTING POSITIVE FOR ASBESTOS

NOTES:

1. SITE PLAN BASED ON MEASUREMENTS AND OBSERVATIONS MADE BY RANSOM CONSULTING, INC. ON JUNE 26-28, 2017.
2. SOME FEATURES ARE APPROXIMATE IN LOCATION AND SCALE.
3. THIS PLAN HAS BEEN PREPARED FOR SOUTHWEST REGION PLANNING COMMISSION. ALL OTHER USES ARE NOT AUTHORIZED, UNLESS WRITTEN PERMISSION IS OBTAINED FROM RANSOM CONSULTING, INC.



		EXTERIOR PLAN
PREPARED FOR: SOUTHWEST REGION PLANNING COMMISSION 39 ASHUELOT STREET	SITE: W.W. CROSS PROPERTY 39 WEBSTER STREET JAFFREY, NEW HAMPSHIRE	DATE: SEPTEMBER 2017 PROJECT: 141.05051 FIGURE: 2

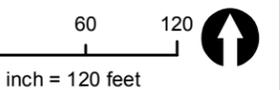
Legend & Notes

-  Site Boundary
-  Sample Testing Positive for Asbestos
- R-02A**
- 2** Roof Area

Notes

1. Site Plan based on National Agricultural Imagery Program Orthophotography
2. Some features are approximate in location and scale
3. This plan has been prepared for Southwest Region Planning Commission. All other uses are not authorized unless written permission is obtained from Ransom Consulting, Inc.

Scale & Orientation



Prepared For

Southwest Region
Planning Commission
37 Ashuelot Street
Keene, New Hampshire

Site Address

W.W. Cross Property
39 Webster Street
Jaffrey, New Hampshire

141.05051 | Sept 2017

Figure 3
Roof Sample Plan



Legend & Notes

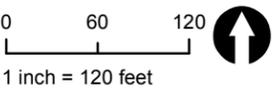
-  Site Boundary
-  Laboratory Soil Sample Location
-  Soil Sample Exceeding NHDES and USEPA Standards for Lead in Soil (lab result)
-  XRF Screening Location Referenced in Titans Report

"A" - Readings in Titan Report are 2-3' from Foundation. Numbered Readings are 3-5' from Foundation. All Ransom samples are from "A" Locations.

Notes

1. Site Plan based on National Agricultural Imagery Program Orthophotography
2. Some features are approximate in location and scale
3. This plan has been prepared for Southwest Region Planning Commission. All other uses are not authorized unless written permission is obtained from Ransom Consulting, Inc.

Scale & Orientation



Prepared For

Southwest Region
Planning Commission
37 Ashuelot Street
Keene, New Hampshire

Site Address

W.W. Cross Property
39 Webster Street
Jaffrey, New Hampshire

141.05051 | Sept 2017

Figure 4
Soil Sample Locations



ATTACHMENT A

Photograph Log

Hazardous Building Materials Inventory
W.W. Cross Property
39 Webster Road
Jaffrey, New Hampshire

Photograph Log



Photo 1 (5-11-17): Central portion of the Site building as seen from parking area near Webster Street.



Photo 2 (5-11-17): Southeasterly portion of Site building.



Photo 3 (5-11-17): Westerly portion of Site building, location of former boiler room. AST bunker housing 20,000-gallon No. 6 oil AST on left.



Photo 4 (6-27-17): Vermiculite insulation within AST bunker (sample set 62); ACM (Tremolite) found to be present.



Photo 5 (6-27-17): ACM exterior window glaze (sample set 55) associated with metal sash windows in the original office areas.



Photo 6 (6-27-17): ACM caulk associated with overhead doors in former boiler room (sample sets 60 & 61).

Photograph Log



Photo 7 (6-27-17): ACM residual mixed mastics in original office areas (sample set 13).



Photo 8 (6-27-17): ACM mastic associated with vinyl stair treads in entryway to office area (sample set 30).



Photo 9 (6-27-17): ACM interior window glaze associated with metal sash windows in the original office areas (sample set 26) and in Room 17 (sample set 31).

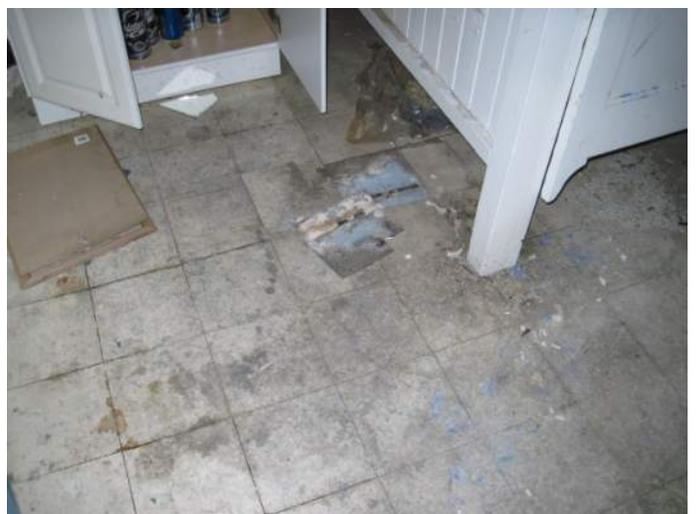


Photo 10 (6-27-17): ACM 9-inch floor tiles (sample set 09) located in bathroom within Site Building Room 22.



Photo 11 (6-27-17): ACM 9-inch tan floor tiles (sample set 43) located in bathroom within Site Building Room 4.



Photo 12 (6-27-17): ACM 9-inch green floor tiles (sample set 44) located in office within Site Building Room 4.

Photograph Log



Photo 13 (6-27-17): ACM 9-inch gray floor tiles (sample set 50) located in bathroom within Site Building Room 2.



Photo 14 (6-27-17): One of several fire doors observed throughout the Site Building interior (PACM).



Photo 15 (6-27-17): One of several roof penetrations observed with ACM flashing materials.



Photo 16 (6-27-17): One of several areas of roof perimeter/wall flashings with ACM materials.



Photo 17 (6-27-17): View of "saw tooth" skylight area with ACM roofing applied to the shallow slope, and ACM flashings.



Photo 18 (6-27-17): Alternate view of "saw tooth" skylight areas with ACM fields and flashings.

ATTACHMENT B

Certifications

Hazardous Building Materials Inventory
W.W. Cross Property
39 Webster Road
Jaffrey, New Hampshire



This is to certify that
Bonnie A. Best

*has completed the requisite training, and has passed an examination for
reaccreditation as:*

Asbestos Inspector Refresher

pursuant to Title II of the Toxic Substance Control Act, 15 U.S.C. 2646

Course Location

Institute for Environmental Education, Inc.
16 Upton Drive Wilmington, MA 01887

June 15, 2017

Course Dates

17-0379-106-237171

Certificate Number

June 15, 2017

Examination Date

June 15, 2018

Expiration Date

Training Director

16 Upton Drive, Wilmington, MA 01887

Telephone 978.658.5272

www.ieetrains.com

INSTITUTE FOR ENVIRONMENTAL EDUCATION



This is to certify that
Lucas Hathaway

*has completed the requisite training, and has passed an examination for
reaccreditation as:*

Asbestos Inspector Refresher

pursuant to Title II of the Toxic Substance Control Act, 15 U.S.C. 2646

Course Location

Institute for Environmental Education, Inc.
16 Upton Drive Wilmington, MA 01887

June 15, 2017

Course Dates

17-0379-106-234345

Certificate Number

June 15, 2017

Examination Date

June 15, 2018

Expiration Date

Training Director

16 Upton Drive, Wilmington, MA 01887

Telephone 978.658.5272

www.ieetrains.com

INSTITUTE FOR ENVIRONMENTAL EDUCATION

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101433-0

Optimum Analytical & Consulting LLC
Salem, NH

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:*

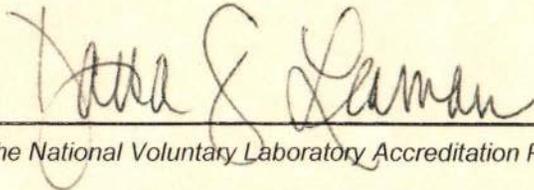
Asbestos Fiber Analysis

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).*

2017-04-01 through 2018-03-31

Effective Dates




For the National Voluntary Laboratory Accreditation Program



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

Optimum Analytical & Consulting LLC

85 Stiles Road

Suite 201

Salem, NH 03079

Ms. Jamie L. Noel

Phone: 603-706-0263

Email: jamie.noel@optimumanalytical.com

<http://www.optimumanalytical.com>

ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 101433-0

Bulk Asbestos Analysis

Code

Description

18/A01

EPA 600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples

18/A03

EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

A handwritten signature in cursive script, appearing to read "Dana S. Laman".

For the National Voluntary Laboratory Accreditation Program

ATTACHMENT C

Lead Inspection Report & Soil Sampling Field Sheets
Prepared by Titan Lead Testing, LLC

&

Roof Inspection Report
Prepared by Roof Management Consultants, Inc.

Hazardous Building Materials Inventory
W.W. Cross Property
39 Webster Road
Jaffrey, New Hampshire



Titan Lead Testing, LLC
PO Box 760709
Melrose, MA 02176

Tel: 781-789-3287
Fax: 781-662-3300

July 7, 2017

Ransom Consulting
12 Kent Way, Suite 100
Byfield, MA 01922
Attention: Steven Rickerich

RE: Lead Testing Results
WW Cross
39 Webster St.
Jaffrey, NH 03452
Ransom Project #

Dear Mr. Rickerich:

This report presents the results of testing for the presence of lead paint on painted surfaces as well as soil locations at the WW Cross Building, 39 Webster Street, Jaffrey, New Hampshire. Representative of Titan Lead Testing, LLC (Titan), Mr. David Pesce, performed the testing on June 26, 2017. Mr. Pesce is manufacturer's-trained in the proper use and interpretation of results of the XRF Spectrum Analyzer. Mr. Pesce is also a New Hampshire Department of Health and Human Services licensed Lead Risk Assessor (License No. RA-59).

Scope of Work

The purpose of the lead testing was to determine the lead content of various painted interior and exterior building substrates prior to renovation. Selected accessible painted surfaces on the interior and exterior of the building were tested by Titan. Concentrations of lead in paint were measured on site by portable XRF analysis.

In addition, concentrations of lead in soil were measured on site by representatives of Titan with a portable X-Ray Fluorescence Analyzer (XRF) at various locations around the building at different distances from the building (between two to five feet away from the building in most cases). At each of these spots, the highest concentration was determined, and a single soil sample was collected by representative of Ransom Consulting (Ransom), Bonnie Best, for laboratory analysis. The results of the laboratory testing are not contained in this report.

Sampling Protocol

The lead content of painted surfaces was determined using a portable X-ray Fluorescence (XRF) Spectrum Analyzer (HEURESIS Pb200i, Serial # 1014). The XRF Spectrum Analyzer uses a radioactive source to excite the electrons of lead atoms (if present) in paints. As the lead atom electrons return to their normal state, they emit X-rays, which are counted by the XRF Spectrum Analyzer. This data is processed and the results are converted to milligrams of lead per square centimeter (mg/cm^2) of sampled surface area.

The lead concentration of soil was first measured by portable Niton XL3t-600 XRF analyzer following EPA Method 6200 for soil analysis. The XRF Spectrum Analyzer uses an X-ray tube to excite the electrons of lead atoms (if present). As the lead atom electrons return to their normal state, they emit X-rays, which are counted by the XRF Spectrum Analyzer. This data is processed and the results are converted to parts per million (ppm).

Results

The XRF testing results indicate that levels of lead on surfaces tested range were between less than $0.10 \text{ mg}/\text{cm}^2$ (lower limit of quantification of the XRF) and $16.0 \text{ mg}/\text{cm}^2$. Renovation and demolition activities that impact surfaces where lead may be present require specific work practices and disposal requirements. A summary of the lead testing results is attached in Table 1.

The soil testing indicated that each area picked for testing had a variation in lead concentration at each distance away from the building. The lowest level analyzed was < 8 ppm, and the highest was 1,728 ppm. A summary of these results is attached in Table 2.

Recommendations

The employer of workers who disturb or remove lead paint must comply with OSHA Standard 29 CFR 1926.62 - Lead. This applies to all construction work, alteration, or repair, including painting, where an employee may be occupationally exposed to lead. This standard does not establish a minimum threshold for the lead content by any other testing method, below which an initial exposure assessment is not required. An initial exposure assessment is required for each renovation or demolition activity that will disturb lead. This standard also contains additional requirements concerning the disturbance or removal of lead.

Debris containing lead generated from construction activities must be characterized to determine disposal requirements (construction debris or hazardous waste). This can be accomplished by performing the characteristic leachate procedure (TCLP) or using other methods, which accurately characterize the waste.

Limitations

Lead paint testing was performed on representative interior and exterior building substrates in selected building areas. Additional lead-containing building substrates and components may be present in other building areas or hidden by floor, wall and ceiling finishes or otherwise may be inaccessible.

Lead paint testing was performed to determine the lead content of painted building components that may be impacted by renovation activities and should not be used to determine compliance with the New Hampshire Department of Health and Human Services regulations. Please call if you have any questions or require additional information.

Sincerely,
Titan Lead Testing, LLC



David Pesce
Master Lead Inspector/Risk Assessor

Attachment

ATTACHMENT

LEAD TESTING RESULTS BY XRF

TABLE 1. XRF Lead Paint Results

Room/Area	Location/Component	Color	Substrate	Results (mg/cm ²)
Exterior	Block Siding	Red	Concrete	5.0
Exterior	Railing	Black	Metal	< 0.1
Exterior	Door	Silver	Metal	< 0.1
Exterior	Door Frame	Silver	Metal	< 0.1
Exterior	Water Meter	Red	Metal	1.1
Exterior	Flat Siding	Red	Concrete	5.5
Exterior	Loading Dock Door	Gray	Metal	< 0.1
Exterior	Loading Dock Door Frm	White	Metal	< 0.1
Exterior	Loading Dock Floor	Gray	Metal	< 0.1
Exterior	Railing	Yellow	Metal	4.6
Exterior	Foundation	White	Concrete	10
Exterior	Steps	Yellow	Concrete	1.2
Exterior	Flat Siding	Brown	Concrete	8.2
Exterior	Posts	yellow	Metal	5.1
Exterior	Garage Door Casing	Brown	Wood	0.5
Exterior	Brick Siding	Red	Brick	2.7
Exterior	Foundation	Red	Concrete	5.1
Exterior	Outdoor Furnace	Gray	Metal	< 0.1
Exterior	Outdoor Furnace Base	Gray	Concrete	0.8
Exterior	H2O Pump	Yellow	Metal	< 0.1
Exterior	Window Sill	Brown	Concrete	1.8
Exterior	Upper Trim	Brown	Wood	5.1
Exterior	Upper Trim	Brown	Wood	5.3
Outbuilding	Block Siding	Beige	Concrete	5.4
Outbuilding	Posts	Black	Metal	6.8
Outbuilding	Cabinet	Black	Metal	< 0.1
Outbuilding	Upper Trim	Beige	Concrete	5.0
Area # 21	Wall	White	Concrete	< 0.1
Area # 21	Wall	Gray	Concrete	< 0.1
Area # 21	Wall	Green	Concrete	< 0.1
Area # 21	Ceiling	White	Wood	< 0.1
Area # 21	Beam	White	Metal	< 0.1
Area # 21	Cabinet	Gray	Wood	< 0.1
Area # 21	Column	Gray	Metal	0.3
Area # 21	Column	Green	Metal	0.3
Area # 21	Door Frame	White	Metal	< 0.1
Area # 21	Door	White	Metal	< 0.1
Area # 21	Fire Door	Green	Metal	15.3
Area # 21	Fire Door Track	White	Metal	< 0.1

Room/Area	Location/Component	Color	Substrate	Results (mg/cm ²)
Area # 20	Door Casing	White	Wood	< 0.1
Area # 20	Bath Stall	White	Wood	< 0.1
Area # 20	Wall	White	Concrete	< 0.1
Area # 20	Wall	Gray	Concrete	< 0.1
Area # 20	Ceiling	White	Wood	< 0.1
Area # 20	Beam	White	Metal	< 0.1
Area # 20	Fire Door	White	Metal	16.0
Area # 20	Wall	Brown	Concrete	0.4
Area # 20	Overhead Door	White	Metal	< 0.1
Area #18-21 Corridor	Door	Green	Metal	0.2
Area #18-21 Corridor	Door Frame	White	Metal	0.2
Area #18-21 Corridor	Door Frame	Green	Metal	0.4
Area #18-21 Corridor	Door	Red	Metal	0.4
Area #18-21 Corridor	Door Frame	Red	Metal	0.4
Area #18-21 Corridor	Wall	Red	Concrete	0.4
Area #18-21 Corridor	Column	White	Metal	0.3
Area #18-21 Corridor	Column	Gray	Metal	0.3
Area # 19	Wall	Gray	Gypsum	< 0.1
Area # 19	Wall	Blue	Gypsum	< 0.1
Area # 19	Wall	Blue	Concrete	0.3
Area # 19	Wall	Black	Gypsum	< 0.1
Area # 19	Column	White	Metal	0.2
Area # 19	Ceiling	White	Wood	0.3
Area # 19	Beam	White	Metal	0.3
Area # 19	Knee Wall	Gray	Gypsum	< 0.1
Area # 19	Knee Wall Top	White	Wood	< 0.1
Area # 19	Baseboard	White	Wood	< 0.1
Area # 19	Window Casing	White	Wood	< 0.1
Area # 19	Door	Black	Metal	< 0.1
Area # 19	Door Casing	Black	Wood	< 0.1
Area # 19	Door	Brown	Wood	< 0.1
Area # 19	Wall	Gray	Concrete	< 0.1
Area # 19	Pipe Chase	Black	Wood	< 0.1
Area # 19	Pipe	White	Metal	0.6
Area # 19	Conduit	White	Metal	0.2
Area # 19	Pipe	Gray	Metal	< 0.1
Area # 19	Wall	Red	Gypsum	1.7
Area # 19	Wall	Yellow	Gypsum	4.2
Area # 19	Column	Red	Metal	< 0.1
Area # 19	Column	Yellow	Metal	< 0.1

Room/Area	Location/Component	Color	Substrate	Results (mg/cm ²)
Area # 19	Baseboard	Brown	Wood	< 0.1
Area # 19	Radiator	White	Metal	< 0.1
Area # 19	Cabinet	White	Wood	< 0.1
Area # 19	Wall	White	Concrete	< 0.1
Area # 19	Wall	Gray	Wood	< 0.1
Area # 15	Wall	Yellow	Concrete	< 0.1
Area # 15	Wall	Gray	Concrete	< 0.1
Area # 15	Wall	White	Concrete	0.2
Area # 15	Wall	Gray	Metal	< 0.1
Area # 15	Column	White	Metal	8.5
Area # 15	Column	Gray	Metal	1.6
Area # 15	Wall	Blue	Concrete	< 0.1
Area # 15	Door	White	Metal	< 0.1
Area # 15	Door Casing	White	Wood	< 0.1
Area # 15	Overhead Door	White	Metal	< 0.1
Area # 15	Pipe	Blue	Metal	< 0.1
Area # 15	Wall	Green	Concrete	< 0.1
Area # 15	Wall	Green	Brick	< 0.1
Area # 15	Wall	White	Brick	< 0.1
Area # 15	Floor Panel	Brown	Metal	0.2
Area # 15	Beam	White	Metal	< 0.1
Area # 15	Beam	White	Wood	0.2
Area # 15	Ceiling	White	Wood	< 0.1
Area # 8	Wall	White	Concrete	< 0.1
Area # 8	Wall	Gray	Concrete	< 0.1
Area # 8	Ceiling	White	Wood	< 0.1
Area # 8	Beam	White	Wood	< 0.1
Area # 8	Column	Gray	Metal	3.8
Area # 8	Column	White	Metal	1.5
Area # 8	I-Column	Black	Metal	0.2
Area # 8	Column	Yellow	Metal	1.7
Area # 8	Door	White	Metal	10.6
Area # 8	Fire Door	Gray	Metal	13.0
Area # 8	Fire Door	White	Metal	0.3
Area # 8	Lintel	White	Metal	< 0.1
Area # 8	Pipe	Gray	Metal	0.2
Area # 8	Bracket	White	Metal	0.2
Area # 6	Wall	White	Concrete	1.9
Area # 6	Wall	Gray	Concrete	2.6
Area # 6	Column	White	Metal	0.3

Room/Area	Location/Component	Color	Substrate	Results (mg/cm ²)
Area # 6	Column	Yellow	Metal	< 0.1
Area # 6	Floor Panel	Brown	Metal	0.2
Area # 6	Floor Panel	Gray	Concrete	< 0.1
Area # 6	Ceiling	White	Wood	< 0.1
Area # 6	Beam	White	Wood	< 0.1
Area # 6	Pipe	White	Metal	< 0.1
Area # 16	Wall	Blue	Concrete	< 0.1
Area # 16	Wall	White	Concrete	0.2
Area # 16	Wall	Yellow	Concrete	< 0.1
Area # 16	Column	White	Metal	0.2
Area # 16	Column	Black	Metal	3.2
Area # 16	Ceiling	White	Wood	0.3
Area # 16	Beam	White	Wood	0.2
Area # 16	Beam	White	Metal	0.2
Area # 16	Fire Door	White	Metal	13.6
Area # 16	Window Sill	White	Concrete	0.4
Area # 16	Window Sash	White	Metal	4.9
Area # 16	Wall	White	Concrete	< 0.1
Area # 5	Wall	Blue	Concrete	< 0.1
Area # 5	Ceiling	White	Wood	< 0.1
Area # 5	Beam	White	Wood	0.2
Area # 5	Floor Panel	Brown	Metal	< 0.1
Area # 5	Wall	White	Wood	< 0.1
Area # 5	Wall	Blue	Wood	< 0.1
Area # 5	Door	Blue	Wood	< 0.1
Area # 5	Door Casing	Blue	Wood	< 0.1
Area # 5	Column	Blue	Metal	1.3
Area # 5	Column	White	Metal	1.3
Area # 5A - Bathroom	Wall	White	Gypsum	< 0.1
Area # 5A - Bathroom	Door	Blue	Wood	0.2
Area # 5A - Bathroom	Stall	Blue	Metal	< 0.1
Area # 5A - Bathroom	Drain Pipe	White	Metal	0.8
Area # 4A - Bathroom	Wall	Light Pink	Concrete	< 0.1
Area # 4A - Bathroom	Wall	Pink	Concrete	< 0.1
Area # 4A - Bathroom	Baseboard	Pink	Wood	< 0.1
Area # 4A - Bathroom	Chair Rail	Pink	Wood	0.2
Area # 4A - Bathroom	Door	Pink	Wood	< 0.1
Area # 4A - Bathroom	Door Casing	Pink	Wood	< 0.1
Area # 4	Wall	Pink	Concrete	0.2
Area # 4	Wall	White	Concrete	0.2

Room/Area	Location/Component	Color	Substrate	Results (mg/cm ²)
Area # 4	Column	White	Metal	2.7
Area # 4	Column	Yellow	Metal	1.8
Area # 4	Ceiling	White	Wood	< 0.1
Area # 4	Beam	White	Wood	< 0.1
Area # 4B - Office Space	Door	Green	Wood	< 0.1
Area # 4B - Office Space	Door Casing	Green	Wood	< 0.1
Area # 4B - Office Space	Wall	White	Plaster	< 0.1
Area # 4B - Office Space	Baseboard	White	Wood	< 0.1
Area # 4B - Office Space	Chair Rail	White	Wood	< 0.1
Area # 4B - Office Space	Shelf	White	Wood	< 0.1
Area # 3	Wall	White	Concrete	< 0.1
Area # 3	Wall	Pink	Concrete	0.2
Area # 3	Wall	Yellow	Concrete	< 0.1
Area # 3	Fire Door	White	Metal	5.8
Area # 3	Fire Door Frame	Yellow	Wood	< 0.1
Area # 3	Column	Yellow	Metal	0.3
Area # 3	Column	White	Metal	0.3
Area # 3	Shelf Frame	Red	Metal	< 0.1
Area # 3	Cage Frame	White	Wood	< 0.1
Area # 3	Wall	White	Brick	< 0.1
Area # 3	Floor Panel	Brown	Metal	< 0.1
Area # 3	Ceiling	White	Wood	< 0.1
Area # 3	Beam	White	Wood	< 0.1
Area # 2	Wall	White	Concrete	0.2
Area # 2	Wall	White	Plaster	0.4
Area # 2	Door	White	Wood	< 0.1
Area # 2	Door Casing	White	Wood	0.4
Area # 2	Door	Blue	Wood	0.4
Area # 2	Door Casing	Blue	Wood	0.5
Area # 2	Column	Gray	Metal	< 0.1
Area # 2	Column	Yellow	Metal	0.2
Area # 2	Column	White	Metal	< 0.1
Area # 2	Fire Door	White	Metal	9.4
Area # 2	Ceiling	White	Wood	< 0.1
Area # 2	Beam	White	Wood	< 0.1
Area # 2	Beam	White	Metal	< 0.1
Area # 2	Floor Panel	Brown	Metal	0.2
Area # 2	Wall	White	Brick	0.3
Area # 2A - Bathroom	Stall	Blue	Metal	< 0.1
Area # 2A - Bathroom	Wall	White	Plaster	0.4

Room/Area	Location/Component	Color	Substrate	Results (mg/cm ²)
Area # 2A - Bathroom	Door	White	Wood	0.2
Area # 2A - Bathroom	Wall	White	Brick	0.2
Area # 1	Wall	White	Concrete	< 0.1
Area # 1	Wall	White	Brick	0.2
Area # 1	Column	Yellow	Metal	0.2
Area # 1	Column	White	Metal	0.4
Area # 1	Ceiling	White	Wood	0.3
Area # 1	Beam	White	Wood	0.3
Area # 1	Beam	White	Metal	0.2
Area # 1	Column	Gray	Metal	< 0.1
Area # 1	Door	Gray	Metal	< 0.1
Area # 1	Door Frame	Gray	Metal	< 0.1
Area # 1	Overhead Door	White	Metal	< 0.1
Area # 1	Fire Door	White	Metal	9.6
Area # 1	Double-Hung Win Sash	Gray	Metal	0.5
Area # 1	Double-Hung Ext Sash	Brown	Metal	1.5
Area # 1	Window Sash	White	Metal	0.3
Area # 1	Cage Frame	Yellow	Metal	1.2
Area #H - Boiler Room	Wall	Beige	Brick	< 0.1
Area #H - Boiler Room	Door	Gray	Metal	< 0.1
Area #H - Boiler Room	Door Casing	Green	Wood	4.5
Area #H - Boiler Room	Overhead Door	White	Metal	< 0.1
Area #H - Boiler Room	Window Sill	Gray	Wood	4.5
Area #H - Boiler Room	Window Sash	Gray	Wood	8.3
Area #H - Boiler Room	Wall	Gray	Concrete	2.8
Area #H - Boiler Room	Handrail	Brown	Metal	< 0.1
Area #H - Boiler Room	Steps	Gray	Metal	0.3
Area #H - Boiler Room	Fire Door	Gray	Metal	15.8
Area # 17	Wall	White	Concrete	< 0.1
Area # 17	Wall	White	Brick	< 0.1
Area # 17	Fire Door	White	Metal	13.0
Area # 17	Fire Door Frame	Yellow	Metal	6.0
Area # 17	Column	White	Metal	0.4
Area # 17	Column	Yellow	Metal	0.6
Area # 17	Window Sill	White	Concrete	0.4
Area # 17	Window Sash	Gray	Metal	0.5
Area # 17	Wall	Blue	Concrete	< 0.1
Area # 17	Floor	Yellow	Concrete	0.2
Area # 17 - Loading Dock	Wall	White	Concrete	< 0.1
Area # 17 - Loading Dock	Wall	Blue	Concrete	< 0.1

Room/Area	Location/Component	Color	Substrate	Results (mg/cm ²)
Area # 17 - Loading Dock	Wall	Brown	Brick	0.2
Area # 17 - Loading Dock	Overhead Door	Gray	Metal	< 0.1
Area # 17 - Loading Dock	Column	White	Metal	0.5
Area # 17 - Loading Dock	Column	Gray	Metal	0.6
Area # 17 - Loading Dock	Door Frame	Red	Metal	0.2
Area # 17 - Loading Dock	Dock Floor	Gray	Metal	< 0.1
Area # 17 - Loading Dock	Beam	White	Wood	0.2
Area # 17 - Loading Dock	Ceiling	White	Wood	0.2
Area # 17 - Loading Dock	Wall Corner	Yellow	Metal	1.3
Area # 17 - Loading Dock	Shelf Frame	White	Metal	< 0.1
Area # 22	Wall	White	Concrete	< 0.1
Area # 22	Wall	Blue	Concrete	0.2
Area # 22	Wall Corner	Blue	Metal	2.2
Area # 22	Column	White	Metal	2.9
Area # 22	Column	Blue	Metal	2.3
Area # 22	Column	Green	Metal	2.0
Area # 22	Window Sill	Green	Concrete	0.2
Area # 22	Door	Blue	Wood	< 0.1
Area # 22	Door Casing	Blue	Wood	< 0.1
Area # 22	Fire Door	White	Metal	16.0
Area # 22	Fire Door	Blue	Metal	11.2
Area # 22	Door Casing	White	Wood	< 0.1
Area # 22	Window Casing	White	Wood	< 0.1
Area # 22	Door Frame	White	Metal	0.2
Area # 22	Door Frame	Blue	Metal	0.2
Front Offices	Wall	Pink	Gypsum	< 0.1
Front Offices	Wall Panel	Green	Wood	< 0.1
Front Offices	Wall Panel	White	Wood	< 0.1
Front Offices	Window Sill	Green	Wood	< 0.1
Front Offices	New Window Sash	Brown	Metal	< 0.1
Front Offices	Exterior Sash	White	Metal	0.2
Front Offices	Shelf	Brown	Wood	< 0.1
Front Offices	Door	Brown	Wood	< 0.1
Front Offices	Door Casing	Brown	Wood	< 0.1
Front Offices	Door Casing	White	Wood	0.2
Front Offices	Wall	White	Concrete	0.2
Front Offices	Door	Silver	Metal	< 0.1
Front Offices	Steps	Brown	Concrete	< 0.1
Front Offices	Column	White	Metal	0.6
Front Offices	Old Window Sash	Brown	Metal	9.1

Room/Area	Location/Component	Color	Substrate	Results (mg/cm ²)
Front Offices	Window Sill	Brown	Wood	0.6
Front Offices	Radiator	Green	Metal	< 0.1
Front Offices	Wall	Green	Gypsum	< 0.1
Front Offices	Baseboard	Brown	Wood	< 0.1
Front Offices	Wall	White	Gypsum	< 0.1
Front Offices	Wall	Red	Gypsum	< 0.1
Front Offices	Radiator	Red	Metal	< 0.1
Front Offices	Pipe	White	Metal	0.2
Front Offices	Floor	Yellow	Wood	0.2
Front Offices	Door Casing	Black	Wood	0.2
Front Offices	Bathroom Stall	Green	Metal	< 0.1
Front Offices	Door	Brown	Metal	< 0.1
Front Offices	Radiator	Beige	Metal	< 0.1
Area # 18	Cabinet	Brown	Wood	< 0.1
Area # 18	Baseboard	Gray	Wood	0.2
Area # 18	Wall	White	Gypsum	< 0.1
Area # 18	Column	White	Metal	< 0.1
Area # 18	Column	Blue	Metal	< 0.1
Area # 18	Wall	White	Concrete	0.2
Area # 18	Wall	Blue	Concrete	< 0.1
Area # 18	Window Sash	White	Metal	< 0.1
Area # 18	Floor Panel	Brown	Metal	0.2
Area # 18	Wall	Green	Gypsum	< 0.1
Area # 18	Door	Brown	Wood	0.2
Area # 18	Door Casing	Brown	Wood	< 0.1
Area # 18	Door	Brown	Metal	< 0.1
Area # 18	Wall	White	Brick	0.2
Area # 18	Wall	Blue	Brick	< 0.1
Area # 18 Plating Room	Wall	White	Concrete	< 0.1
Area # 18 Plating Room	Wall	White	Wood	0.2
Area # 18 Plating Room	Column	White	Metal	0.2
Area # 18 Plating Room	Shelf	Green	Wood	0.2
Women's Locker Room	Wall	Green	Gypsum	< 0.1
Women's Locker Room	Wall	Beige	Concrete	< 0.1
Women's Locker Room	Window Casing	White	Wood	< 0.1
Women's Locker Room	Truss	White	Wood	0.2
Women's Locker Room	Ceiling	White	Metal	0.2
Locker Room Hallway	Wall	Purple	Gypsum	< 0.1
Locker Room Hallway	Wall	Purple	Concrete	< 0.1
Locker Room Hallway	Window Sill	Purple	Concrete	3.0

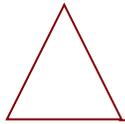
Room/Area	Location/Component	Color	Substrate	Results (mg/cm ²)
Locker Room Hallway	Door	Brown	Wood	< 0.1
Locker Room Hallway	Door Casing	White	Wood	< 0.1
Men's Locker Room	Wall	White	Concrete	4.1
Men's Locker Room	Window Sill	White	Concrete	4.4
Exterior	Floor	Gray	Concrete	0.4
Exterior	Wall	Purple	Concrete	2.0
Exterior	Wall	Blue	Gypsum	< 0.1
Exterior	Corner	Yellow	Metal	0.3
Exterior	Wood Panel	Brown	Wood	< 0.1
Garage Exterior	Beam	Brown	Metal	< 0.1
Garage Exterior	Siding	White	Metal	< 0.1
Garage Exterior	Frame	Brown	Metal	0.3

- <0.10 = less than the limit of quantification of the XRF.
- mg/cm² = milligrams of lead per square centimeter of sampled surface area.

TABLE 2. XRF Results for Lead in Soil

Reading #	Location/Description	Result (ppm)
2572	cal_check - SiO2	<8
2573	cal_check - NIST 2780 PP	5038
2574	cal_check - NIST 2709a	< 12
2575	cal_check - NIST 2711 med	1122
2576	SS1	80
2577	SS2	64
2578	SS3	70
2579	SS4	13
2580	SS5	< 10
2581	SS6A	319
2582	SS7	219
2583	SS8	211
2584	SS9	177
2585	SS9A	1584
2586	SS10	545
2587	SS10A	517
2588	SS11	183
2589	SS11A	675
2590	SS12	272
2591	SS12A	430
2592	SS13	187
2593	SS13A	365
2594	SS14	386
2595	SS14A	723
2596	SS15	561
2597	SS15A	13
2598	SS16	303
2599	SS16A	295
2600	SS16C	357
2601	SS17	540
2602	SS17A	289
2603	SS18	683
2604	SS18A	354
2605	SS19	699
2606	SS19A	957
2607	SS20	46
2608	SS20A	282
2610	SS21	529
2611	SS21A	605
2612	SS22	226

Reading #	Location/Description	Result (ppm)
2613	SS22A	112
2614	SS23	844
2615	SS23A	1390
2616	SS24	60
2617	SS24A	153
2618	SS25	27
2619	SS26	52
2620	SS26A	119
2621	SS27	71
2622	SS27A	403
2623	SS28	106
2624	SS28A	162
2625	cal_check - SiO2	<9
2626	cal_check - NIST 2711 Med	1096
2627	SS29	<13
2628	SS2A	57
2629	SS3A	241
2630	SS4A	954
2631	SS5A	1485
2632	SS6A	89
2633	SS7A	169
2634	SS8A	1728
2635	cal_check - SiO2	<9
2636	cal_check - NIST 2711 med	1182
2637	cal_check - NIST 2709a	<12
2638	cal_check - NIST 2780 PP	5077



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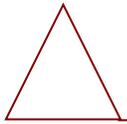
Core Cut Report

June 28, 2017

Job Site: 38 Webster Street, Jaffrey, NH

Prepared For: Ransom Environmental Consultants, Inc.

Core Cut #:	Roof Section #:	Roof Area:	Description of Materials:
1	1	Field	Built-Up Roofing, Concrete Deck
2	1	Field	Built-Up Roofing, Concrete Deck
3	1	Wall Flash	Built-Up Roofing, Concrete Deck
4	1	Wall Flash	Built-Up Roofing, Concrete Deck
5	1	Curb Flash	Built-Up Roofing, Concrete Deck
6	1	Curb Flash	Built-Up Roofing, Concrete Deck
7	2	Field	Built-Up Roofing, Wood Deck
8	2	Field	Built-Up Roofing, Wood Deck
9	2	Wall Flash	Built-Up Roofing, Wood Deck
10	2	Wall Flash	Built-Up Roofing, Wood Deck
11	2	Pipe Flash	Built-Up Roofing, Wood Deck
12	2	Pipe Flash	Built-Up Roofing, Wood Deck
13	3	Field	Built-Up Roofing, 1/2" Fiberboard, Built-Up Roofing, Wood Deck
14	3	Field	Built-Up Roofing, 1/2" Fiberboard, Built-Up Roofing, Wood Deck
15	3	Wall Flash	Built-Up Roofing, 1/2" Fiberboard, Built-Up Roofing, Wood Deck
16	3	Wall Flash	Built-Up Roofing, 1/2" Fiberboard, Built-Up Roofing, Wood Deck
17	3	Pipe Flash	Built-Up Roofing, 1/2" Fiberboard, Built-Up Roofing, Wood Deck
18	3	Pipe Flash	Built-Up Roofing, 1/2" Fiberboard, Built-Up Roofing, Wood Deck
19	3	Saw Flash	Built-Up Roofing, 1/2" Fiberboard, Built-Up Roofing, Wood Deck
20	3	Saw Flash	Built-Up Roofing, 1/2" Fiberboard, Built-Up Roofing, Wood Deck
21	3	Saw Repair	Built-Up Roofing, 1/2" Fiberboard, Built-Up Roofing, Wood Deck
22	3	Saw Repair	Built-Up Roofing, 1/2" Fiberboard, Built-Up Roofing, Wood Deck
23	3	Sky Flash	Built-Up Roofing, 1/2" Fiberboard, Built-Up Roofing, Wood Deck
24	3	Sky Flash	Built-Up Roofing, 1/2" Fiberboard, Built-Up Roofing, Wood Deck

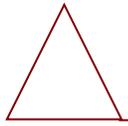


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25	4	Field	TPO Membrane, 1" Iso Insulation, Built-Up Roofing, Wood Deck
26	4	Field	TPO Membrane, 1" Iso Insulation, Built-Up Roofing, Wood Deck
27	4	Saw Field	TPO Membrane, 1" Iso Insulation, Built-Up Roofing, Wood Deck
28	4	Saw Field	TPO Membrane, 1" Iso Insulation, Built-Up Roofing, Wood Deck
29	4	Field Repair	Modified Bitumen Sheet Roofing
30	4	Field Repair	Modified Bitumen Sheet Roofing
31	5	Field	TPO Membrane, 1" Iso Insulation, Built-Up Roofing, Wood Deck
32	5	Field	TPO Membrane, 1" Iso Insulation, Built-Up Roofing, Wood Deck
33	5	Curb Flash	TPO Membrane, 1" Iso Insulation, Built-Up Roofing, Wood Deck
34	5	Curb Flash	TPO Membrane, 1" Iso Insulation, Built-Up Roofing, Wood Deck
35	6	Field	EPDM Membrane, 1/2" Fiberboard, Wood Deck
36	6	Field	EPDM Membrane, 1/2" Fiberboard, Wood Deck
37	6	Wall Flash	EPDM Membrane, 1/2" Fiberboard, Wood Deck
38	6	Wall Flash	EPDM Membrane, 1/2" Fiberboard, Wood Deck
39	6	Pipe Flash	EPDM Membrane, 1/2" Fiberboard, Wood Deck
40	6	Pipe Flash	EPDM Membrane, 1/2" Fiberboard, Wood Deck

** "Saw" refers to the sawtooth-style roof areas that were abundant on this building.**

Some areas of the building were avoided due to safety concerns



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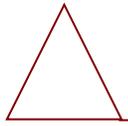
Typical Core Cut and Area Overview Photos



Partial Overview of Roof Sections #6 & #2



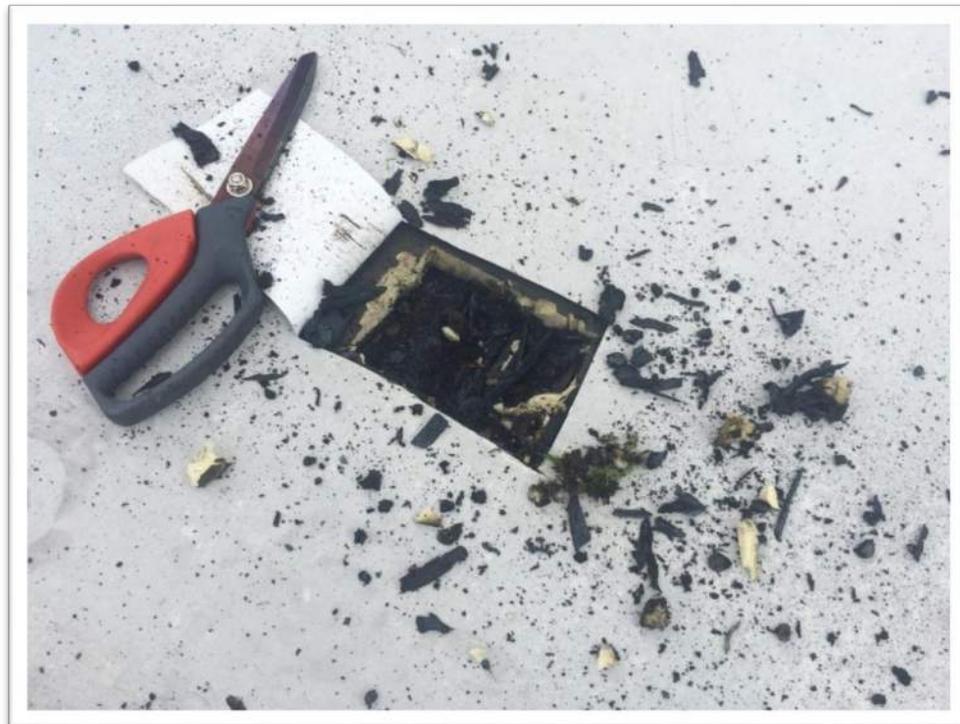
Typical Core Cut made at Wall Flashing



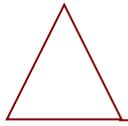
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Examples of the Sawtooth Roof areas that were sampled



Core Cut Made in the Field of Roof Section #4



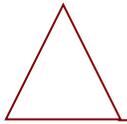
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Core Cut Made in the Field of Roof Section #6

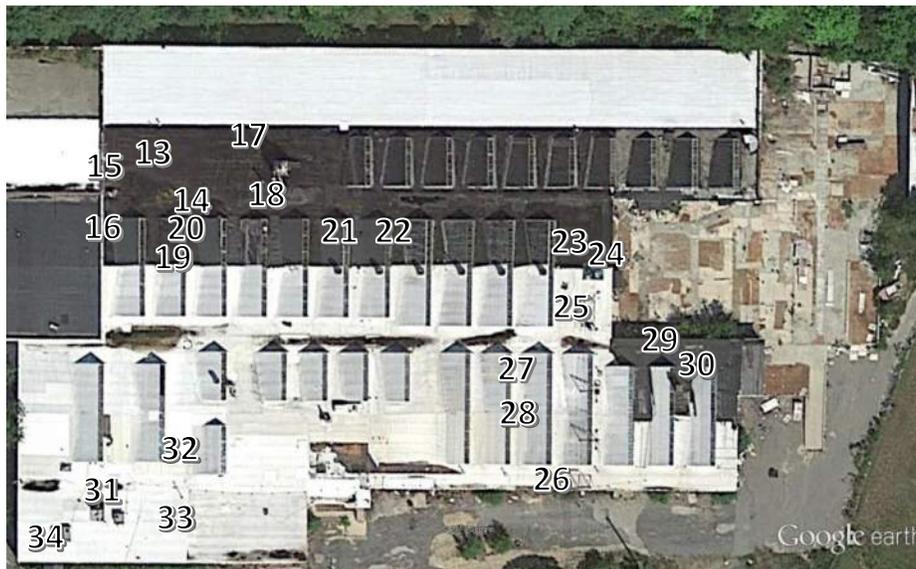


One of the Roof Areas that was avoided for safety



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Approximate Core Cut Locations



ATTACHMENT D

Laboratory Reports

Hazardous Building Materials Inventory
W.W. Cross Property
39 Webster Road
Jaffrey, New Hampshire



Lucas Hathaway
Ransom Environmental Consultants, Inc
400 Commercial St
Portland ME 04101

Project Reference: 141.05051.010
Laboratory Batch #: 1721501
Date Samples Received: 07/07/2017
Date Samples Analyzed: 07/14/2017
Date of Final Report: 07/19/2017

SAMPLE IDENTIFICATION:

One Hundred Thirty Two (132) samples from SWRPC; Former WW Cross; Jaffrey, NH project were submitted by Bonnie Best on 07/07/2017

This bulk sample(s) was delivered to Optimum Analytical Consulting, LLC (Optimum) located in Salem, New Hampshire for asbestos content determination.

ANALYTICAL METHOD:

Analytical procedures were performed in accordance with the U.S. Environmental Protection Agency (EPA) Recommended Method for the Determination of Asbestos in Bulk Samples by Polarized Light Microscopy and Dispersion Staining (PLM/DS)(EPA-600/M4-82-020, EPA-600/ R-93-116). This report relates only to those samples analyzed, and may not be indicative of other similar appearing materials existing at this, or other sites. Quantification of asbestos content was determined by Calibrated Visual Estimation. Optimum is not responsible for sample collection activities or analytical method limitations. The laboratory is not responsible for the accuracy of results when requested to physically separate and analyze layered samples.

In any given material, fibers with a small diameter (<0.25µm) may not be detected by the PLM method. Floor tile and other resinously bound material may yield a false negative if the asbestos fibers are too small to be resolved using PLM. Additional analytical methods may be required. Optimum recommends using Transmission Electron Microscopy (TEM) for a more definitive analysis.

Optimum will retain all samples for a minimum of three months. Further analysis or return of samples must be requested within this three month period to guarantee their availability. This report may not be reproduced except in full, without the written approval of Optimum Analytical and Consulting, LLC.

Use of the NVLAP and AIHA Logo in no way constitutes or implies product certification, approval, or endorsement by the National Institute of Standards and Technology or the American Industrial Hygiene Association.

Detection Limit <1%, Reporting Limits: CVES = 1%, 400 Point Count = .25%, 1000 Point Count = 0.1%; Present or Absent are observations made during a qualitative analysis.

This report is considered preliminary until signed by both the Laboratory Analyst and Laboratory Director or Supervisor. If you have any questions regarding this report, please do not hesitate to contact us.

Jamie L. Noel
Laboratory Director

Kristina Scaviola
Laboratory Supervisor



CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: SWRPC; Former WW Cross; Jaffrey, NH

ORDER #: 1721501
PROJECT #: 141.05051.010
DATE COLLECTED: 06/26/2017
COLLECTED BY: Bonnie Best
DATE RECEIVED: 07/07/2017
ANALYSIS DATE: 07/14/2017
REPORT DATE: 07/19/2017
ANALYST: Jason Chomor

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
1721501-001 01A	Gym Section Drywall, Tan/Grey	LAYER 1 100%	None Detected	Cellulose Fiber 12% Fibrous Glass 3% Binder/Filler 85%
1721501-002 01B	Gym Section Drywall, Tan/Grey	LAYER 1 100%	None Detected	Cellulose Fiber 12% Fibrous Glass 3% Binder/Filler 85%
1721501-003 02A	Gym Section Joint Compound, White	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
1721501-004 02B	Gym Section Joint Compound, White	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
1721501-005 03A	Gym Section 4-inch Vinyl Cove Base, Grey	LAYER 1 100%	None Detected	Cellulose Fiber 2% Binder/Filler 98%
1721501-006 03B	Gym Section 4-inch Vinyl Cove Base, Grey	LAYER 1 100%	None Detected	Cellulose Fiber 2% Binder/Filler 98%
1721501-007 04A	Gym Section Adhesive, Yellow	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
1721501-008 04B	Gym Section Adhesive, Yellow	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
1721501-009 05A	Gym Offices 12-inch Floor Tile, White	LAYER 1 100%	None Detected	Cellulose Fiber 2% Binder/Filler 98%



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ANALYST: Jason Chomor

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1721501-010 05B	Gym Offices 12-inch Floor Tile, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	2% 98%
1721501-011 06A	Gym Offices LAYER 1 Residual Mixed Mastic, Black/Tan	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	2% 98%
	LAYER 2 Mastic on Opposite Side, Tan	LAYER 2 100%	None Detected		Cellulose Fiber Binder/Filler	2% 98%
1721501-012 06B	Gym Offices LAYER 1 Residual Mixed Mastic, Black/Tan	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	2% 98%
	LAYER 2 Mastic on Opposite Side, Tan	LAYER 2 100%	None Detected		Cellulose Fiber Binder/Filler	2% 98%
1721501-013 07A	Gym Offices 2-ft x 4-ft Ceiling Tile (long fissure), Tan	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Binder/Filler	55% 30% 15%
1721501-014 07B	Gym Offices 2-ft x 4-ft Ceiling Tile (long fissure), Tan	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Binder/Filler	55% 30% 15%
1721501-015 08A	Bath-SW Bld Crn 9-inch Floor Tile, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	2% 98%
1721501-016 08B	Bath-SW Bld Crn 9-inch Floor Tile, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	2% 98%
1721501-017 09A	Bath-SW Bld Crn Mastic, Brown	LAYER 1 100%	Chrysotile	2%	Cellulose Fiber Binder/Filler	1% 97%



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: SWRPC; Former WW Cross; Jaffrey, NH

ORDER #: 1721501
PROJECT #: 141.05051.010
DATE COLLECTED: 06/26/2017
COLLECTED BY: Bonnie Best
DATE RECEIVED: 07/07/2017
ANALYSIS DATE: 07/14/2017
REPORT DATE: 07/19/2017
ANALYST: Jason Chomor

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1721501-018 09B	Bath-SW Bld Crn Mastic, Brown Note: Positive Stop	LAYER 1 100%				
1721501-019 10A	Office Area 2-ft x 2-ft Ceiling Tile, White/Grey	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Binder/Filler	65% 30% 5%
1721501-020 10B	Office Area 2-ft x 2-ft Ceiling Tile, White/Grey	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Binder/Filler	65% 30% 5%
1721501-021 11A	Office Area 4-inch Vinyl Cove Base, Brown	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	2% 98%
1721501-022 11B	Office Area 4-inch Vinyl Cove Base, Brown	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	2% 98%
1721501-023 12A	Office Area Adhesive, Yellow	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Binder/Filler	1% 1% 98%
1721501-024 12B	Office Area Adhesive, Yellow	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Binder/Filler	1% 1% 98%
1721501-025 13A	Office Area Residual Mixed Mastic, Tan/Black	LAYER 1 100%	Chrysotile	3%	Cellulose Fiber Binder/Filler	1% 96%
1721501-026 13B	Office Area Residual Mixed Mastic, Tan/Black Note: Positive Stop	LAYER 1 100%				



85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: SWRPC; Former WW Cross; Jaffrey, NH

ORDER #: 1721501
PROJECT #: 141.05051.010
DATE COLLECTED: 06/26/2017
COLLECTED BY: Bonnie Best
DATE RECEIVED: 07/07/2017
ANALYSIS DATE: 07/14/2017
REPORT DATE: 07/19/2017
ANALYST: Jason Chomor

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
1721501-027 14A	Office Area 12-inch Acoustic Ceiling Tile, Brown	LAYER 1 100%	None Detected	Cellulose Fiber 98% Binder/Filler 2%
1721501-028 14B	Office Area 12-inch Acoustic Ceiling Tile, Brown	LAYER 1 100%	None Detected	Cellulose Fiber 98% Binder/Filler 2%
1721501-029 15A	Office Area Glue Daubs, Brown	LAYER 1 100%	None Detected	Cellulose Fiber 2% Binder/Filler 98%
1721501-030 15B	Office Area Glue Daubs, Brown	LAYER 1 100%	None Detected	Cellulose Fiber 2% Binder/Filler 98%
1721501-031 16A	Office Area Drywall, Gray/Brown	LAYER 1 100%	None Detected	Cellulose Fiber 10% Binder/Filler 90%
1721501-032 16B	Office Area Drywall, Gray/Brown	LAYER 1 100%	None Detected	Cellulose Fiber 10% Binder/Filler 90%
1721501-033 17A	Office Area Joint Compound, White	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
1721501-034 17B	Office Area Joint Compound, White	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
1721501-035 18A	Office Area Baths 12-inch Yellow Floor Tile,	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%
1721501-036 18B	Office Area Baths 12-inch Yellow Floor Tile,	LAYER 1 100%	None Detected	Cellulose Fiber 1% Binder/Filler 99%



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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
1721501-037 19A	Office Area Baths 12-inch Blue Floor Tile,	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
1721501-038 19B	Office Area Baths 12-inch Blue Floor Tile,	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
1721501-039 20A	Office Area Baths 12-inch Floor Tile Mastic, Tan	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 3% 97%
1721501-040 20B	Office Area Baths 12-inch Floor Tile Mastic, Tan	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 3% 97%
1721501-041 21A	Locker Rooms Drywall, White/Brown	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 10% 90%
1721501-042 21B	Locker Rooms Drywall, White/Brown	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 10% 90%
1721501-043 22A	Locker Rooms Joint Compound, White	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 10% 90%
1721501-044 22B	Locker Rooms Joint Compound, White	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 10% 90%
1721501-045 23A	Locker Rooms Ceramic Tile Grout, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%
1721501-046 23B	Locker Rooms Ceramic Tile Grout, Gray	LAYER 1 100%	None Detected	Cellulose Fiber Binder/Filler 1% 99%



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1721501-047 24A	Locker Rooms Ceramic Tile Adhesive, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
1721501-048 24B	Locker Rooms Ceramic Tile Adhesive, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
1721501-049 25A	Office Area Carpet Adhesive, Tan	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
1721501-050 25B	Office Area Carpet Adhesive, Tan	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
1721501-051 26A	Office Area Interior Window Glaze, Gray	LAYER 1 100%	Chrysotile	3%	Cellulose Fiber Non-Fibrous Material	1% 96%
1721501-052 26B	Office Area Interior Window Glaze, Positive Stop	LAYER 1 100%				
1721501-053 27A	Bath-Off Woodworking Area 12" Floor Tile, White	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	1% 99%
1721501-054 27B	Bath-Off Woodworking Area 12" Floor Tile, White	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	1% 99%
1721501-055 28A	Bath-Off Woodworking Area Mastic, Tan	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	3% 97%
1721501-056 28B	Bath-Off Woodworking Area Mastic, Tan	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	3% 97%



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BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1721501-057 29A	Office Area Vinyl Stair Tread, Gray	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	1% 99%
1721501-058 29B	Office Area Vinyl Stair Tread, Gray	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	1% 99%
1721501-059 30A	Office Area Mastic, Black	LAYER 1 100%	Chrysotile	2%	Cellulose Fiber Non-Fibrous Material	1% 97%
1721501-060 30B	Office Area Mastic, Black Note: Positive Stop	LAYER 1 100%				
1721501-061 31A	Room 17 Window Glaze)Lg. Unit Steel Shash, White	LAYER 1 100%	Chrysotile	3%	Cellulose Fiber Non-Fibrous Material	2% 95%
1721501-062 31B	Room 17 Window Glaze (LG-Unit Steel Sash), Positive Stop	LAYER 1 100%				
1721501-063 32A	Room 17 12" Floor Tile, Beige	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	1% 99%
1721501-064 32B	Room 17 12" Floor Tile, Beige	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	1% 99%
1721501-065 33A	Room 17 Mastic, Tan/Black	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	3% 97%



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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
1721501-066 33B	Room 17			
	LAYER 1 Mastic, Black	LAYER 1 100%	None Detected	Cellulose Fiber 3% Non-Fibrous Material 97%
	LAYER 2 Mastic, Tan	LAYER 2 100%	None Detected	Cellulose Fiber 3% Non-Fibrous Material 97%
	1721501-067 34A	Room 17 and East Abutting Room Drywall, White	LAYER 1 100%	None Detected
1721501-068 34B	Room 17 and East Abutting Room Drywall, White	LAYER 1 100%	None Detected	Cellulose Fiber 10% Fibrous Glass 1% Non-Fibrous Material 89%
1721501-069 35A	Room 17 and East Abutting Room Joint Compound, White	LAYER 1 100%	None Detected	Cellulose Fiber 3% Non-Fibrous Material 97%
1721501-070 35B	Room 17 and East Abutting Room Joint Compound, White	LAYER 1 100%	None Detected	Cellulose Fiber 3% Non-Fibrous Material 97%
1721501-071 36A	Room 16 12" Floor Tile, Gray	LAYER 1 100%	None Detected	Cellulose Fiber 2% Non-Fibrous Material 98%
1721501-072 36B	Room 16 12" Floor Tile, Gray	LAYER 1 100%	None Detected	Cellulose Fiber 2% Non-Fibrous Material 98%
1721501-073 37A	Room 15 Drywall, White	LAYER 1 100%	None Detected	Cellulose Fiber 10% Fibrous Glass 1% Non-Fibrous Material 89%
1721501-074 37B	Room 15 Drywall, White	LAYER 1 100%	None Detected	Cellulose Fiber 10% Fibrous Glass 1% Non-Fibrous Material 89%



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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1721501-075 38A	Room 15 Joint Compound, White	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	2% 98%
1721501-076 38B	Room 15 Joint Compound, White	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	2% 98%
1721501-077 39A	Room 6 Drywall, White	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	10% 1% 89%
1721501-078 39B	Room 6 Drywall, White	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	10% 1% 89%
1721501-079 40A	Room 6 Joint Compound, White	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	2% 98%
1721501-080 40B	Room 6 Joint Compound, White	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	2% 98%
1721501-081 41A	Room 5 LAYER 1 Plaster, Gray	LAYER 1 100%	None Detected		Cellulose Fiber Synthetic Fiber Non-Fibrous Material	3% 1% 96%
	LAYER 2 Skim Coat, White	LAYER 2 100%	None Detected		Cellulose Fiber Non-Fibrous Material	3% 97%
1721501-082 41B	Room 5 LAYER 1 Plaster, Gray	LAYER 1 100%	None Detected		Cellulose Fiber Synthetic Fiber Non-Fibrous Material	3% 1% 96%
	LAYER 2 Skim Coat, White	LAYER 2 100%	None Detected		Cellulose Fiber Non-Fibrous Material	3% 97%



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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1721501-083 41C	Room 5 LAYER 1 Plaster, Gray	LAYER 1 100%	None Detected		Cellulose Fiber Synthetic Fiber Non-Fibrous Material	3% 1% 96%
	LAYER 2 Skim Coat, White	LAYER 2 100%	None Detected		Cellulose Fiber Non-Fibrous Material	3% 97%
1721501-084 42A	Room 5 Glue Daubs on Plaster, Brown	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	3% 97%
1721501-085 42B	Room 5 Glue Daubs on Plaster, Brown	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	3% 97%
1721501-086 43A	Room 4-Bath 9" Floor Tile, Beige	LAYER 1 100%	Chrysotile	5%	Cellulose Fiber Non-Fibrous Material	1% 94%
1721501-087 43B	Room 4-Bath 9" Floor Tile, Beige Note: Positive Stop	LAYER 1 100%				
1721501-088 44A	Room 4-Office 9" Floor Tile, Green	LAYER 1 100%	Chrysotile	5%	Cellulose Fiber Non-Fibrous Material	1% 94%
1721501-089 44B	Room 4-Office 9" Floor Tile, Positive Stop	LAYER 1 100%				
1721501-090 45A	Room 4-Bath and Office LAYER 1 9" Floor Tile Mastic, Black	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	3% 97%
	LAYER 2 9" Floor Tile Mastic, Brown	LAYER 2 100%	None Detected		Cellulose Fiber Non-Fibrous Material	3% 97%



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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
1721501-091 45B	Room 4-Bath and Office LAYER 1 9" Floor Tile Mastic, Black	LAYER 1 100%	None Detected	Cellulose Fiber 3% Non-Fibrous Material 97%
	LAYER 2 9" Floor Tile Mastic, Brown	LAYER 2 100%	None Detected	Cellulose Fiber 3% Non-Fibrous Material 97%
1721501-092 46A	Room 4-Office No Sample - Same as 14 A/B & 15A/B	LAYER 1 100%		
1721501-093 46B	Room 4-Office No Sample - Same as 14 A/B & 15A/B	LAYER 1 100%		
1721501-094 47A	Room 4-Office No Sample - Same as 14 A/B & 15A/B	LAYER 1 100%		
1721501-095 47B	Room 4-Office No Sample - Same as 14 A/B & 15A/B	LAYER 1 100%		
1721501-096 48A	Room 4-Bath and Office Skim Coat Plaster, White	LAYER 1 100%	None Detected	Cellulose Fiber 3% Non-Fibrous Material 97%
1721501-097 48B	Room 4-Bath and Office Skim Coat Plaster, White	LAYER 1 100%	None Detected	Cellulose Fiber 3% Non-Fibrous Material 97%
1721501-098 48C	Room 4-Bath and Office Skim Coat Plaster, White	LAYER 1 100%	None Detected	Cellulose Fiber 3% Non-Fibrous Material 97%
1721501-099 49A	Room 4-Bath and Office Base Coat Plaster, Gray	LAYER 1 100%	None Detected	Cellulose Fiber 8% Non-Fibrous Material 92%



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Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1721501-100 49B	Room 4-Bath and Office Base Coat Plaster, Gray	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	8% 92%
1721501-101 49C	Room 4-Bath and Office Base Coat Plaster, Gray	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	8% 92%
1721501-102 50A	Room 2-Bath 9" Floor Tile, Gray	LAYER 1 100%	Chrysotile	5%	Cellulose Fiber Non-Fibrous Material	2% 93%
1721501-103 50B	Room 2-Bath 9" Floor Tile, Gray Note: Positive Stop	LAYER 1 100%				
1721501-104 51A	Room 2-Bath Mastic, Black	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	3% 97%
1721501-105 51B	Room 2-Bath Mastic, Black	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	3% 97%
1721501-106 52A	Room 2 Interior Window Glaze, Red/Gray	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
1721501-107 52B	Room 2 Interior Window Glaze, Red/Gray	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
1721501-108 53A	Room 1 Interior Window Glaze, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
1721501-109 53B	Room 1 Interior Window Glaze, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%



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1721501-110 54A	Exterior-Factory Space Exterior Sky-Light Window Glaze, Gray	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
1721501-111 54B	Exterior-Factory Space Exterior Sky-Light Window Glaze, Gray	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
1721501-112 55A	Exterior-Offices Exterior Window Glaze (Lg Units), Gray	LAYER 1 100%	Chrysotile	2%	Cellulose Fiber Binder/Filler	1% 97%
1721501-113 55B	Exterior-Offices Exterior Window Glaze (Lg Units), Gray Note: Positive Stop	LAYER 1 100%				
1721501-114 56A	Exterior Masonry Walls-Original Construction Skim Coat, Gray/Red	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
1721501-115 56B	Exterior Masonry Walls-Original Construction Skim Coat, Gray/Red	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
1721501-116 56C	Exterior Masonry Walls-Original Construction Skim Coat, Gray/Red	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
1721501-117 56D	Exterior Masonry Walls-Original Construction Skim Coat, Gray/Red	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
1721501-118 56E	Exterior Masonry Walls-Original Construction Skim Coat, Gray/Red	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%



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1721501-119 56F	Exterior Masonry Walls-Original Construction Skim Coat, Gray/Red	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
1721501-120 56G	Exterior Masonry Walls-Original Construction Skim Coat, Gray/Red	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
1721501-121 57A	Exterior-Renovated Areas Exterior Window Caulk (Sm units), White/Gray	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
1721501-122 57B	Exterior-Renovated Areas Exterior Window Caulk (Sm units), White/Gray	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
1721501-123 58A	Exterior Gym Area Exterior Window Caulk (Lg units), Gray/Beige	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Binder/Filler	1% 2% 97%
1721501-124 58B	Exterior Gym Area Exterior Window Caulk (Lg units), Gray/Beige	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Binder/Filler	1% 2% 97%
1721501-125 59A	Interior-Room 16 Mastic Assoc. w/ 36A, Yellow	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	3% 97%
1721501-126 59B	Interior-Room 16 Mastic Assoc. w/ 36A, Yellow	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	3% 97%
1721501-127 60A	Exterior Boiler Room Black Caulking,	LAYER 1 100%	Chrysotile	8%	Cellulose Fiber Binder/Filler	1% 91%



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**BULK SAMPLE ANALYSIS REPORT
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1721501-128 60B	Exterior Boiler Room Black Caulking, Positive Stop	LAYER 1 100%				
1721501-129 61A	Exterior Boiler Room Caulking (overhead doors), Gray	LAYER 1 100%	Chrysotile	8%	Cellulose Fiber Binder/Filler	1% 91%
1721501-130 61B	Exterior Boiler Room Caulking (overhead doors), Gray Note: Positive Stop	LAYER 1 100%				
1721501-131 62A	AST Bunker-Interior Vermiculite, Brown/Silver Note: *See vermiculite note at end of report.	LAYER 1 100%	Tremolite	Present	Cellulose Fiber Fibrous Glass	Present Present
1721501-132 62B	AST Bunker-Interior Vermiculite, Brown/Silver Note: Positive Stop	LAYER 1 100%				

This report has been amended to include the analysis of samples that were originally missing. This report replace the previously released report on 7/17/2017.

The EPA recommends assuming vermiculite insulation as asbestos containing. Since there is currently no approved analytical methodology to reliably confirm vermiculite as non-asbestos containing, it is always best to assume vermiculite is contaminated with asbestos and proceed accordingly. For more information see the EPA website at http://www.epa.gov/asbestos/pubs/verm_questions.html.

**Analyst
Signatory:**
Jason Chomor





OPTIMUM

Analytical and Consulting, LLC

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BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

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ANALYST: Jason Chomor

1721501

Client Ransom Consulting, Inc. 400 Commercial St Portland ME 04101
 Contact Bonnie Best / Lucas Hathaway
 Phone 603-436-1490 / 207-772-2891
 Project Former WW Cross
 Location Jaffrey NH
 Ransom Client SWRPC
 Ransom Project # 141.05051.010
 Sample Date 6/26/2017-6/28/2017
 Analysis Bulk PLM in accordance w/NHDES
 TAT Standard
 Report Results to: lucas.hathaway@ransomenv.com; bonnie.best@ransomenv.com
 PO 10197
 Notes/Requests *Positive Stop Requested*

Sample ID	Material	Location
01A	Drywall	Gym Section
01B	Drywall	Gym Section
02A	Joint Compound	Gym Section
02B	Joint Compound	Gym Section
03A	4-inch Vinyl Cove Base	Gym Section
03B	4-inch Vinyl Cove Base	Gym Section
04A	Adhesive	Gym Section
04B	Adhesive	Gym Section
05A	White 12-inch Floor Tile	Gym Offices
05B	White 12-inch Floor Tile	Gym Offices
06A	Residual Mixed Mastics	Gym Offices
06B	Residual Mixed Mastics	Gym Offices
07A	2-ft X 4-ft Ceiling Tile (long fissure)	Gym Offices
07B	2-ft X 4-ft Ceiling Tile (long fissure)	Gym Offices
08A	9-inch White Floor Tile	Bath (SW Bld Crn)
08B	9-inch White Floor Tile	Bath (SW Bld Crn)
09A	Mastic	Bath (SW Bld Crn)

48 7/14/2017



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: SWRPC; Former WW Cross; Jaffrey, NH

ORDER #: 1721501
PROJECT #: 141.05051.010
DATE COLLECTED: 06/26/2017
COLLECTED BY: Bonnie Best
DATE RECEIVED: 07/07/2017
ANALYSIS DATE: 07/14/2017
REPORT DATE: 07/19/2017
ANALYST: Jason Chomor

1721501

09B	Mastic	Bath (SW Bld Crn)
10A	2-ft X 2-ft Ceiling Tile	Office Area
10B	2-ft X 2-ft Ceiling Tile	Office Area
11A	4-inch Vinyl Cove Base	Office Area
11B	4-inch Vinyl Cove Base	Office Area
12A	Adhesive	Office Area
12B	Adhesive	Office Area
13A	Residual Mixed Mastics	Office Area
13B	Residual Mixed Mastics	Office Area
14A	12-inch Acoustic Ceiling Tile	Office Area
14B	12-inch Acoustic Ceiling Tile	Office Area
15A	Glue Daubs	Office Area
15B	Glue Daubs	Office Area
16A	Drywall	Office Area
16B	Drywall	Office Area
17A	Joint Compound	Office Area
17B	Joint Compound	Office Area
18A	12-inch Yellow Floor Tile	Office Area Baths
18B	12-inch Yellow Floor Tile	Office Area Baths
19A	12-inch Blue Floor Tile	Office Area Baths
19B	12-inch Blue Floor Tile	Office Area Baths
20A	12-inch Floor Tile Mastic	Office Area Baths
20B	12-inch Floor Tile Mastic	Office Area Baths
21A	Drywall	Locker Rooms
21B	Drywall	Locker Rooms
22A	Joint Compound	Locker Rooms
22B	Joint Compound	Locker Rooms
23A	Ceramic Tile Grout	Locker Rooms
23B	Ceramic Tile Grout	Locker Rooms
24A	Ceramic Tile Adhesive	Locker Rooms
24B	Ceramic Tile Adhesive	Locker Rooms
25A	Carpet Adhesive	Office Area
25B	Carpet Adhesive	Office Area
26A	Interior Window Glaze	Office Area

1721501
 MBM 7/17/17 (2)



OPTIMUM

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BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

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26B	Interior Window Glaze	Office Area
27A	White 12-inch Floor Tile	Bath (off woodworking area)
27B	White 12-inch Floor Tile	Bath (off woodworking area)
28A	Mastic	Bath (off woodworking area)
28B	Mastic	Bath (off woodworking area)
29A	Vinyl Stair Tread	Office Area
29B	Vinyl Stair Tread	Office Area
30A	Mastic	Office Area
30B	Mastic	Office Area
31A	Window Glaze (Lg-Unit Steel Sash)	Room 17
31B	Window Glaze (Lg-Unit Steel Sash)	Room 17
32A	12-inch Brown Floor Tile	Room 17
32B	12-inch Brown Floor Tile	Room 17
33A	Mastic	Room 17
33B	Mastic	Room 17
34A	Drywall	Room 17 & East Abutting Room
34B	Drywall	Room 17 & East Abutting Room
35A	Joint Compound	Room 17 & East Abutting Room
35B	Joint Compound	Room 17 & East Abutting Room
36A	12-inch Gray Floor Tile	Room 16
36B	12-inch Gray Floor Tile	Room 16
37A	Drywall	Room 15
37B	Drywall	Room 15
38A	Joint Compound	Room 15
38B	Joint Compound	Room 15
39A	Drywall	Room 6
39B	Drywall	Room 6
40A	Joint Compound	Room 6
40B	Joint Compound	Room 6
41A	Plaster	Room 5
41B	Plaster	Room 5
41C	Plaster	Room 5
42A	Glue Daubs on Plaster	Room 5
42B	Glue Daubs on Plaster	Room 5

1721501 8/7/17

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OPTIMUM

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43A 9-inch Tan Floor Tile
 43B 9-inch Tan Floor Tile
 44A 9-inch Green Floor Tile
 44B 9-inch Green Floor Tile
 45A 9-inch Floor Tile Mastic
 45B 9-inch Floor Tile Mastic
 46A/B & 47A/B No sample (same as 14A/B & 15A/B)
 48A Skim Coat Plaster
 48B Skim Coat Plaster
 48C Skim Coat Plaster
 49A Base Coat Plaster
 49B Base Coat Plaster
 49C Base Coat Plaster
 50A 9-inch Gray Floor Tile
 50B 9-inch Gray Floor Tile
 51A Mastic
 51B Mastic
 52A Interior Window Glaze
 52B Interior Window Glaze
 53A Interior Window Glaze
 53B Interior Window Glaze
 54A Exterior Sky-Light Window Glaze
 54B Exterior Sky-Light Window Glaze
 55A Exterior Window Glaze (Lg units)
 55B Exterior Window Glaze (Lg units)
 56A Skim Coat
 56B Skim Coat
 56C Skim Coat
 56D Skim Coat
 56E Skim Coat
 56F Skim Coat
 56G Skim Coat
 57A Exterior Window Caulk (Sm units)
 57B Exterior Window Caulk (Sm units)

Room 4 (Bath)
 Room 4 (Bath)
 Room 4 (Office)
 Room 4 (Office)
 Room 4 (Bath, Office)
 Room 4 (Bath, Office)
 Room 4 (Office)
 Room 4 (Bath, Office)
 Room 2 (Bath)
 Room 2 (Bath)
 Room 2 (Bath)
 Room 2 (Bath)
 Room 2
 Room 2
 Room 1
 Room 1
 Exterior - Factory Space
 Exterior - Factory Space
 Exterior - Offices
 Exterior - Offices
 Exterior Masonry Walls - Original Const.
 Exterior - Renovated Areas
 Exterior - Renovated Areas

1721501

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OPTIMUM

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1721501

58A	Exterior Window Caulk (Lg units)	Exterior Gym Area
58B	Exterior Window Caulk (Lg units)	Exterior Gym Area
59A	Yellow Mastic assoc. with Samples 36A/36B	Interior - Room 16
59B	Yellow Mastic assoc. with Samples 36A/36B	Interior - Room 16
60A	Black Caulking	Exterior Boiler Room
60B	Black Caulking	Exterior Boiler Room
61A	Caulking (overhead doors)	Exterior Boiler Room
61B	Caulking (overhead doors)	Exterior Boiler Room
62A	Vermiculite Insulation	AST Bunker (interior)
62B	Vermiculite Insulation	AST Bunker (interior)

JS 7/14/17

5



OPTIMUM

Analytical and Consulting, LLC

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BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

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ANALYST: Jason Chomor

1513

1721501

Client Ransom Consulting, Inc. 112 Corporate Drive, Portsmouth, NH 03801
 Contact Bonnie Best / Lucas Hathaway
 Phone 603-436-1490 / 207-772-2891
 Project Former WW Cross
 Location Jaffrey NH
 Ransom Client SWRPC
 Ransom Project # 141.05051.010
 Sample Date 6/26/2017-6/28/2017
 Analysis Bulk PLM in accordance w/NHDES
 TAT Standard
 Report Results to: lucas.hathaway@ransomenv.com; bonnie.best@ransomenv.com
 PO 10197
 Notes/Requests **Positive Stop Requested**

Sample ID	Material	Location
54A	Exterior Sky-Light Window Glaze	Exterior - Factory Space
54B	Exterior Sky-Light Window Glaze	Exterior - Factory Space
55A	Exterior Window Glaze (Lg units)	Exterior - Offices
55B	Exterior Window Glaze (Lg units)	Exterior - Offices
56A	Skim Coat	Exterior Masonry Walls - Original Const.
56B	Skim Coat	Exterior Masonry Walls - Original Const.
56C	Skim Coat	Exterior Masonry Walls - Original Const.
56D	Skim Coat	Exterior Masonry Walls - Original Const.
56E	Skim Coat	Exterior Masonry Walls - Original Const.
56F	Skim Coat	Exterior Masonry Walls - Original Const.
56G	Skim Coat	Exterior Masonry Walls - Original Const.
57A	Exterior Window Caulk (Sm units)	Exterior - Renovated Areas
57B	Exterior Window Caulk (Sm units)	Exterior - Renovated Areas
58A	Exterior Window Caulk (Lg units)	Exterior Gym Area
58B	Exterior Window Caulk (Lg units)	Exterior Gym Area

7.19.17



Lucas Hathaway
Ransom Environmental Consultants, Inc
400 Commercial St
Portland ME 04101

Project Reference: 141.05051.010
Laboratory Batch #: 1721393
Date Samples Received: 06/30/2017
Date Samples Analyzed: 07/13/2017
Date of Final Report: 07/14/2017

SAMPLE IDENTIFICATION:

Thirty Eight (38) samples from SWRPC; Former WW Cross-Roofing Only; Jaffrey, NH project were submitted by Client on 06/30/2017

This bulk sample(s) was delivered to Optimum Analytical Consulting, LLC (Optimum) located in Salem, New Hampshire for asbestos content determination.

ANALYTICAL METHOD:

Analytical procedures were performed in accordance with the U.S. Environmental Protection Agency (EPA) Recommended Method for the Determination of Asbestos in Bulk Samples by Polarized Light Microscopy and Dispersion Staining (PLM/DS)(EPA-600/M4-82-020, EPA-600/ R-93-116). This report relates only to those samples analyzed, and may not be indicative of other similar appearing materials existing at this, or other sites. Quantification of asbestos content was determined by Calibrated Visual Estimation. Optimum is not responsible for sample collection activities or analytical method limitations. The laboratory is not responsible for the accuracy of results when requested to physically separate and analyze layered samples.

In any given material, fibers with a small diameter (<0.25µm) may not be detected by the PLM method. Floor tile and other resinously bound material may yield a false negative if the asbestos fibers are too small to be resolved using PLM. Additional analytical methods may be required. Optimum recommends using Transmission Electron Microscopy (TEM) for a more definitive analysis.

Optimum will retain all samples for a minimum of three months. Further analysis or return of samples must be requested within this three month period to guarantee their availability. This report may not be reproduced except in full, without the written approval of Optimum Analytical and Consulting, LLC.

Use of the NVLAP and AIHA Logo in no way constitutes or implies product certification, approval, or endorsement by the National Institute of Standards and Technology or the American Industrial Hygiene Association.

Detection Limit <1%, Reporting Limits: CVES = 1%, 400 Point Count = .25%, 1000 Point Count = 0.1%; Present or Absent are observations made during a qualitative analysis.

This report is considered preliminary until signed by both the Laboratory Analyst and Laboratory Director or Supervisor. If you have any questions regarding this report, please do not hesitate to contact us.

Jamie L. Noel
Laboratory Director

Kristina Scaviola
Laboratory Supervisor



85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: SWRPC; Former WW Cross-Roofing Only; Jaffrey, NH

ORDER #: 1721393
PROJECT #: 141.05051.010
DATE COLLECTED: 06/26/2017
COLLECTED BY: Client
DATE RECEIVED: 06/30/2017
ANALYSIS DATE: 07/13/2017
REPORT DATE: 07/14/2017
ANALYST: Kristina Scaviola

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1721393-001 R-01A	Section 1 Roofing, Black	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	85% 15%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1721393-002 R-01B	Section 1 Roofing, Black	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	85% 15%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1721393-003 R-02A	Section 1 Wall Flashing, Black	LAYER 1 100%	Chrysotile	18%	Cellulose Fiber Non-Fibrous Material	50% 32%
Total % Asbestos:			18.0%		Total % Non-Asbestos: 82.0%	
1721393-004 R-02B	Section 1 Wall Flashing, Positive Stop	LAYER 1 100%				
1721393-005 R-03A	Section 1 Curb Flashing, Black	LAYER 1 100%	Chrysotile	15%	Cellulose Fiber Non-Fibrous Material	65% 20%
Total % Asbestos:			15.0%		Total % Non-Asbestos: 85.0%	
1721393-006 R-03B	Section 1 Curb Flashing, Black Note: Positive Stop	LAYER 1 100%				
1721393-007 R-04A	Section 2 Roof Field, Black	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	80% 20%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1721393-008 R-04B	Section 2 Roof Field, Black	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	80% 20%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	



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REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1721393-009 R-05A	Section 2 Wall Flashing, Black	LAYER 1 100%	Chrysotile	8%	Cellulose Fiber Non-Fibrous Material	50% 42%
Total % Asbestos:				8.0%	Total % Non-Asbestos: 92.0%	
1721393-010 R-05B	Section 2 Wall Flashing, Positive Stop	LAYER 1 100%				
1721393-011 R-06A	Section 2 Penetration Flashing, Black	LAYER 1 100%	Chrysotile	25%	Cellulose Fiber Non-Fibrous Material	40% 35%
Total % Asbestos:				25.0%	Total % Non-Asbestos: 75.0%	
1721393-012 R-06B	Section 2 Penetration Flashing, Positive Stop	LAYER 1 100%				
1721393-013 R-07A	Section 3 Roof Field, Black	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	80% 20%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1721393-014 R-07B	Section 3 Roof Field, Black	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	80% 20%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1721393-015 R-08A	Section 3 Wall Flashing, Black	LAYER 1 100%	Chrysotile	5%	Cellulose Fiber Fibrous Glass Non-Fibrous Material	35% 25% 35%
Total % Asbestos:				5.0%	Total % Non-Asbestos: 95.0%	
1721393-016 R-08B	Section 3 Wall Flashing, Positive Stop	LAYER 1 100%				



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ANALYST: Kristina Scaviola

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1721393-017 R-09A	Section 3 Penetration Flashing, Black	LAYER 1 100%	Chrysotile	8%	Cellulose Fiber Fibrous Glass Non-Fibrous Material	15% 35% 42%
Total % Asbestos:				8.0%	Total % Non-Asbestos: 92.0%	
1721393-018 R-09B	Section 3 Penetration Flashing, Positive Stop	LAYER 1 100%				
1721393-019 R-10A	Section 3 Sawtooth Flashing, Black	LAYER 1 100%	Chrysotile	3%	Cellulose Fiber Fibrous Glass Non-Fibrous Material	15% 15% 67%
Total % Asbestos:				3.0%	Total % Non-Asbestos: 97.0%	
1721393-020 R-10B	Section 3 Sawtooth Flashing, Positive Stop	LAYER 1 100%				
1721393-021 R-11A	Section 3 Sawtooth Repair, Black	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	1% 45% 54%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%		
1721393-022 R-11B	Section 3 Sawtooth Repair, Black	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	1% 45% 54%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%		
1721393-023 R-12A	Section 3 Skylight Flashing, Black/Silver	LAYER 1 100%	Chrysotile	8%	Cellulose Fiber Fibrous Glass Non-Fibrous Material	15% 15% 62%
Total % Asbestos:				8.0%	Total % Non-Asbestos: 92.0%	
1721393-024 R-12B	Section 3 Skylight Flashing, Positive Stop	LAYER 1 100%				



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REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1721393-025 R-13A	Section 4 Roof Field, Black	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	80% 20%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1721393-026 R-13B	Section 4 Roof Field, Black	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	80% 20%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1721393-027 R-14A	Section 4 Sawtooth Field, Brown/Black	LAYER 1 100%	Chrysotile	18%	Cellulose Fiber Non-Fibrous Material	30% 52%
Total % Asbestos:			18.0%		Total % Non-Asbestos: 82.0%	
1721393-028 R-14B	Section 4 Sawtooth Field, Positive Stop	LAYER 1 100%				
1721393-029 R-15A	Section 4 Roof Field Repair, Black	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	1% 45% 54%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1721393-030 R-15B	Section 4 Roof Field Repair, Black	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	1% 45% 54%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1721393-031 R-16A	Section 5 Roof Field, Black	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	80% 20%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1721393-032 R-16B	Section 5 Roof Field, Black	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	80% 20%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	



OPTIMUM

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ANALYSIS DATE: 07/13/2017
REPORT DATE: 07/14/2017
ANALYST: Kristina Scaviola

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
1721393-033 R-17A	Section 5 Curb Flashing, Black	LAYER 1 100%	None Detected	Cellulose Fiber 80% Non-Fibrous Material 20%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1721393-034 R-17B	Section 5 Curb Flashing, Black	LAYER 1 100%	None Detected	Cellulose Fiber 80% Non-Fibrous Material 20%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1721393-035 R-18A	Fuel Bunker Roof Field, Black	LAYER 1 100%	None Detected	Cellulose Fiber 5% Non-Fibrous Material 95%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1721393-036 R-18B	Fuel Bunker Roof Field, Black	LAYER 1 100%	None Detected	Cellulose Fiber 5% Non-Fibrous Material 95%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1721393-037 R-19A	Fuel Bunker Edge Flashing, Black	LAYER 1 100%	None Detected	Cellulose Fiber 80% Non-Fibrous Material 20%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%
1721393-038 R-19B	Fuel Bunker Edge Flashing, Black	LAYER 1 100%	None Detected	Cellulose Fiber 80% Non-Fibrous Material 20%
Total % Asbestos:			No Asbestos Detected	Total % Non-Asbestos: 100.0%

**Analyst
Signatory:**

Kristina Scaviola





OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: SWRPC; Former WW Cross-Roofing Only; Jaffrey, NH

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

ORDER #: 1721393
PROJECT #: 141.05051.010
DATE COLLECTED: 06/26/2017
COLLECTED BY: Client
DATE RECEIVED: 06/30/2017
ANALYSIS DATE: 07/13/2017
REPORT DATE: 07/14/2017
ANALYST: Kristina Scaviola

Client	Ransom Consulting, Inc. 400 Commercial St Portland ME 04101
Contact	Lucas Hathaway
Phone	207-772-2891
Project	Former WW Cross - Roofing only
Location	Jaffrey NH
Ransom Client	SWRPC
Ransom Project #	141.05051.010
Sample Date	6/26/2017-6/27/2017
Analysis	Bulk PLM in accordance w/NHDES
TAT	Standard
Report Results to:	lucas.hathaway@ransomenv.com ; bonnie.best@ransomenv.com
PO	10189
Notes/Requests	

1721393

quaternary 6/30/17 1400

Sample ID	Material	Location
R-01A	Roof field	Section 1
R-01B	Roof field	Section 1
R-02A	Wall flashing	Section 1
R-02B	Wall flashing	Section 1
R-03A	Curb flashing	Section 1
R-03B	Curb flashing	Section 1
R-04A	Roof field	Section 2
R-04B	Roof field	Section 2
R-05A	Wall flashing	Section 2
R-05B	Wall flashing	Section 2
R-06A	Penetration Flashing	Section 2
R-06B	Penetration Flashing	Section 2
R-07A	Roof field	Section 3
R-07B	Roof field	Section 3
R-08A	Wall flashing	Section 3
R-08B	Wall flashing	Section 3
R-09A	Penetration Flashing	Section 3



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

CLIENT: Ransom Environmental Consultants, Inc
ADDRESS: 400 Commercial St
CITY / STATE / ZIP: Portland ME 04101
CONTACT: Lucas Hathaway
DESCRIPTION: PLM Analysis
LOCATION: SWRPC; Former WW Cross-Roofing Only; Jaffrey, NH

ORDER #: 1721393
PROJECT #: 141.05051.010
DATE COLLECTED: 06/26/2017
COLLECTED BY: Client
DATE RECEIVED: 06/30/2017
ANALYSIS DATE: 07/13/2017
REPORT DATE: 07/14/2017
ANALYST: Kristina Scaviola

R-09B	Penetration flashing	Section 3
R-10A	Sawtooth flashing	Section 3
R-10B	Sawtooth flashing	Section 3
R-11A	Sawtooth repair	Section 3
R-11B	Sawtooth repair	Section 3
R-12A	Skylight flashing	Section 3
R-12B	Skylight flashing	Section 3
R-13A	Roof field	Section 4
R-13B	Roof field	Section 4
R-14A	Sawtooth field	Section 4
R-14B	Sawtooth field	Section 4
R-15A	Roof field repair	Section 4
R-15B	Roof field repair	Section 4
R-16A	Roof field	Section 5
R-16B	Roof field	Section 5
R-17A	Curb flashing	Section 5
R-17B	Curb flashing	Section 5
R-18A	Roof field	Fuel bunker
R-18B	Roof field	Fuel bunker
R-19A	Edge flashing	Fuel bunker
R-19B	Edge flashing	Fuel bunker

1721393

9UGMwef 6/30/17 H



ANALYTICAL REPORT

Lab Number:	L1722742
Client:	Ransom Consulting, Inc. 112 Corporate Drive Pease International Tradeport Portsmouth, NH 03801
ATTN:	John Ouellette
Phone:	(603) 436-1490
Project Name:	FORMER WW CROSS PROPERTY
Project Number:	141.05051.010.02
Report Date:	07/13/17

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1722742-01	SS101	SOIL	JAFFREY, NH	06/28/17 14:00	07/05/17
L1722742-02	SS102	SOIL	JAFFREY, NH	06/28/17 14:10	07/05/17
L1722742-03	SS103	SOIL	JAFFREY, NH	06/28/17 14:16	07/05/17
L1722742-04	SS104	SOIL	JAFFREY, NH	06/28/17 14:20	07/05/17
L1722742-05	SS105	SOIL	JAFFREY, NH	06/28/17 14:25	07/05/17
L1722742-06	SS106	SOIL	JAFFREY, NH	06/28/17 14:30	07/05/17
L1722742-07	SS-DUP	SOIL	JAFFREY, NH	06/28/17 14:35	07/05/17
L1722742-08	PCB-01	SOLID	JAFFREY, NH	06/28/17 08:20	07/05/17
L1722742-09	PCB-02	SOLID	JAFFREY, NH	06/28/17 09:00	07/05/17
L1722742-10	PCB-03	SOLID	JAFFREY, NH	06/28/17 10:30	07/05/17
L1722742-11	PCB-04	SOLID	JAFFREY, NH	06/28/17 12:23	07/05/17
L1722742-12	PCB-05	SOLID	JAFFREY, NH	06/28/17 14:00	07/05/17
L1722742-13	PCB-DUP	SOLID	JAFFREY, NH	06/28/17 13:00	07/05/17

Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

Case Narrative (continued)

Report Submission

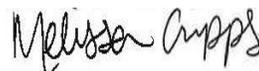
All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

PCBs

L1722742-08 and -09: The sample has elevated detection limits due to limited sample volume available for analysis.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Melissa Cripps

Title: Technical Director/Representative

Date: 07/13/17

ORGANICS

PCBS

Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

SAMPLE RESULTS

Lab ID: L1722742-08
 Client ID: PCB-01
 Sample Location: JAFFREY, NH

Matrix: Solid
 Analytical Method: 1,8082A
 Analytical Date: 07/13/17 15:16
 Analyst: HT
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/28/17 08:20
 Date Received: 07/05/17
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 07/12/17 17:00
 Cleanup Method: EPA 3630
 Cleanup Date: 07/13/17
 Cleanup Method: EPA 3665A
 Cleanup Date: 07/13/17
 Cleanup Method: EPA 3660B
 Cleanup Date: 07/13/17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	3850	1090	1	A
Aroclor 1221	ND		ug/kg	3850	1120	1	A
Aroclor 1232	ND		ug/kg	3850	856.	1	A
Aroclor 1242	ND		ug/kg	1920	688.	1	A
Aroclor 1248	ND		ug/kg	3850	1080	1	A
Aroclor 1254	3000	J	ug/kg	3850	785.	1	A
Aroclor 1260	ND		ug/kg	3850	863.	1	A
Aroclor 1262	ND		ug/kg	3850	792.	1	A
Aroclor 1268	ND		ug/kg	1920	679.	1	A
PCBs, Total	3000	J	ug/kg	1920	679.	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		30-150	A
Decachlorobiphenyl	64		30-150	A
2,4,5,6-Tetrachloro-m-xylene	68		30-150	B
Decachlorobiphenyl	66		30-150	B

Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

SAMPLE RESULTS

Lab ID: L1722742-09
 Client ID: PCB-02
 Sample Location: JAFFREY, NH

Matrix: Solid
 Analytical Method: 1,8082A
 Analytical Date: 07/13/17 15:30
 Analyst: HT
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/28/17 09:00
 Date Received: 07/05/17
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 07/12/17 17:00
 Cleanup Method: EPA 3630
 Cleanup Date: 07/13/17
 Cleanup Method: EPA 3665A
 Cleanup Date: 07/13/17
 Cleanup Method: EPA 3660B
 Cleanup Date: 07/13/17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	1550	440.	1	A
Aroclor 1221	ND		ug/kg	1550	453.	1	A
Aroclor 1232	ND		ug/kg	1550	345.	1	A
Aroclor 1242	ND		ug/kg	775	278.	1	A
Aroclor 1248	ND		ug/kg	1550	435.	1	A
Aroclor 1254	ND		ug/kg	1550	316.	1	A
Aroclor 1260	ND		ug/kg	1550	348.	1	A
Aroclor 1262	ND		ug/kg	1550	319.	1	A
Aroclor 1268	ND		ug/kg	775	274.	1	A
PCBs, Total	ND		ug/kg	775	274.	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		30-150	A
Decachlorobiphenyl	66		30-150	A
2,4,5,6-Tetrachloro-m-xylene	68		30-150	B
Decachlorobiphenyl	67		30-150	B

Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

SAMPLE RESULTS

Lab ID: L1722742-10
 Client ID: PCB-03
 Sample Location: JAFFREY, NH

Date Collected: 06/28/17 10:30
 Date Received: 07/05/17
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 07/12/17 17:00
 Cleanup Method: EPA 3630
 Cleanup Date: 07/13/17
 Cleanup Method: EPA 3665A
 Cleanup Date: 07/13/17
 Cleanup Method: EPA 3660B
 Cleanup Date: 07/13/17

Matrix: Solid
 Analytical Method: 1,8082A
 Analytical Date: 07/13/17 15:44
 Analyst: HT
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	645	183.	1	A
Aroclor 1221	ND		ug/kg	645	189.	1	A
Aroclor 1232	ND		ug/kg	645	144.	1	A
Aroclor 1242	ND		ug/kg	322	115.	1	A
Aroclor 1248	ND		ug/kg	645	181.	1	A
Aroclor 1254	1960		ug/kg	645	132.	1	B
Aroclor 1260	1120		ug/kg	645	145.	1	B
Aroclor 1262	ND		ug/kg	645	133.	1	A
Aroclor 1268	ND		ug/kg	322	114.	1	A
PCBs, Total	3080		ug/kg	645	132.	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	67		30-150	A
Decachlorobiphenyl	53		30-150	A
2,4,5,6-Tetrachloro-m-xylene	70		30-150	B
Decachlorobiphenyl	61		30-150	B

Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

SAMPLE RESULTS

Lab ID: L1722742-11
 Client ID: PCB-04
 Sample Location: JAFFREY, NH

Date Collected: 06/28/17 12:23
 Date Received: 07/05/17
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 07/12/17 17:00
 Cleanup Method: EPA 3630
 Cleanup Date: 07/13/17
 Cleanup Method: EPA 3665A
 Cleanup Date: 07/13/17
 Cleanup Method: EPA 3660B
 Cleanup Date: 07/13/17

Matrix: Solid
 Analytical Method: 1,8082A
 Analytical Date: 07/13/17 15:58
 Analyst: HT
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	629	179.	1	A
Aroclor 1221	ND		ug/kg	629	184.	1	A
Aroclor 1232	ND		ug/kg	629	140.	1	A
Aroclor 1242	324		ug/kg	314	112.	1	A
Aroclor 1248	ND		ug/kg	629	176.	1	A
Aroclor 1254	704		ug/kg	629	128.	1	A
Aroclor 1260	443	J	ug/kg	629	141.	1	A
Aroclor 1262	ND		ug/kg	629	130.	1	A
Aroclor 1268	ND		ug/kg	314	111.	1	A
PCBs, Total	1470	J	ug/kg	314	111.	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	70		30-150	A
Decachlorobiphenyl	61		30-150	A
2,4,5,6-Tetrachloro-m-xylene	70		30-150	B
Decachlorobiphenyl	63		30-150	B

Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

SAMPLE RESULTS

Lab ID: L1722742-12
 Client ID: PCB-05
 Sample Location: JAFFREY, NH

Matrix: Solid
 Analytical Method: 1,8082A
 Analytical Date: 07/13/17 16:12
 Analyst: HT
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/28/17 14:00
 Date Received: 07/05/17
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 07/12/17 17:00
 Cleanup Method: EPA 3630
 Cleanup Date: 07/13/17
 Cleanup Method: EPA 3665A
 Cleanup Date: 07/13/17
 Cleanup Method: EPA 3660B
 Cleanup Date: 07/13/17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	599	170.	1	A
Aroclor 1221	ND		ug/kg	599	175.	1	A
Aroclor 1232	ND		ug/kg	599	133.	1	A
Aroclor 1242	ND		ug/kg	299	107.	1	A
Aroclor 1248	ND		ug/kg	599	168.	1	A
Aroclor 1254	ND		ug/kg	599	122.	1	A
Aroclor 1260	ND		ug/kg	599	134.	1	A
Aroclor 1262	ND		ug/kg	599	123.	1	A
Aroclor 1268	ND		ug/kg	299	106.	1	A
PCBs, Total	ND		ug/kg	299	106.	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	65		30-150	A
Decachlorobiphenyl	61		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		30-150	B
Decachlorobiphenyl	69		30-150	B

Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

SAMPLE RESULTS

Lab ID: L1722742-13
 Client ID: PCB-DUP
 Sample Location: JAFFREY, NH

Date Collected: 06/28/17 13:00
 Date Received: 07/05/17
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 07/12/17 17:00
 Cleanup Method: EPA 3630
 Cleanup Date: 07/13/17
 Cleanup Method: EPA 3665A
 Cleanup Date: 07/13/17
 Cleanup Method: EPA 3660B
 Cleanup Date: 07/13/17

Matrix: Solid
 Analytical Method: 1,8082A
 Analytical Date: 07/13/17 16:26
 Analyst: HT
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	639	181.	1	A
Aroclor 1221	ND		ug/kg	639	187.	1	A
Aroclor 1232	ND		ug/kg	639	142.	1	A
Aroclor 1242	ND		ug/kg	319	114.	1	A
Aroclor 1248	ND		ug/kg	639	179.	1	A
Aroclor 1254	ND		ug/kg	639	130.	1	A
Aroclor 1260	ND		ug/kg	639	143.	1	A
Aroclor 1262	ND		ug/kg	639	132.	1	A
Aroclor 1268	ND		ug/kg	319	113.	1	A
PCBs, Total	ND		ug/kg	319	113.	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	67		30-150	A
Decachlorobiphenyl	63		30-150	A
2,4,5,6-Tetrachloro-m-xylene	68		30-150	B
Decachlorobiphenyl	69		30-150	B

Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8082A
Analytical Date: 07/13/17 13:52
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 07/12/17 17:00
Cleanup Method: EPA 3630
Cleanup Date: 07/13/17
Cleanup Method: EPA 3665A
Cleanup Date: 07/13/17
Cleanup Method: EPA 3660B
Cleanup Date: 07/13/17

Parameter	Result	Qualifier	Units	RL	MDL	Column
PCB by GC - Westborough Lab for sample(s): 08-13 Batch: WG1021899-1						
Aroclor 1016	ND		ug/kg	526	149.	A
Aroclor 1221	ND		ug/kg	526	154.	A
Aroclor 1232	ND		ug/kg	526	117.	A
Aroclor 1242	ND		ug/kg	263	94.2	A
Aroclor 1248	ND		ug/kg	526	148.	A
Aroclor 1254	ND		ug/kg	526	107.	A
Aroclor 1260	ND		ug/kg	526	118.	A
Aroclor 1262	ND		ug/kg	526	108.	A
Aroclor 1268	ND		ug/kg	263	92.9	A
PCBs, Total	ND		ug/kg	263	92.9	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		30-150	A
Decachlorobiphenyl	63		30-150	A
2,4,5,6-Tetrachloro-m-xylene	72		30-150	B
Decachlorobiphenyl	73		30-150	B

Lab Control Sample Analysis Batch Quality Control

Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
PCB by GC - Westborough Lab Associated sample(s): 08-13 Batch: WG1021899-2 WG1021899-3									
Aroclor 1016	61		69		40-140	12		50	A
Aroclor 1260	65		73		40-140	12		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71		80		30-150	A
Decachlorobiphenyl	69		74		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		73		30-150	B
Decachlorobiphenyl	72		74		30-150	B

METALS

Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

SAMPLE RESULTS

Lab ID: L1722742-01
 Client ID: SS101
 Sample Location: JAFFREY, NH
 Matrix: Soil
 Percent Solids: 66%

Date Collected: 06/28/17 14:00
 Date Received: 07/05/17
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	2.54	J	mg/kg	2.99	0.160	1	07/06/17 09:15	07/07/17 01:52	EPA 3050B	1,6010C	MC



Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

SAMPLE RESULTS

Lab ID: L1722742-02
 Client ID: SS102
 Sample Location: JAFFREY, NH
 Matrix: Soil
 Percent Solids: 90%

Date Collected: 06/28/17 14:10
 Date Received: 07/05/17
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	29.7		mg/kg	2.18	0.117	1	07/06/17 09:15	07/07/17 01:56	EPA 3050B	1,6010C	MC



Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

SAMPLE RESULTS

Lab ID: L1722742-03
 Client ID: SS103
 Sample Location: JAFFREY, NH
 Matrix: Soil
 Percent Solids: 84%

Date Collected: 06/28/17 14:16
 Date Received: 07/05/17
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	178		mg/kg	2.36	0.127	1	07/06/17 09:15	07/07/17 02:00	EPA 3050B	1,6010C	MC



Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

SAMPLE RESULTS

Lab ID: L1722742-04
 Client ID: SS104
 Sample Location: JAFFREY, NH
 Matrix: Soil
 Percent Solids: 78%

Date Collected: 06/28/17 14:20
 Date Received: 07/05/17
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	458		mg/kg	2.52	0.135	1	07/06/17 09:15	07/07/17 02:05	EPA 3050B	1,6010C	MC



Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

SAMPLE RESULTS

Lab ID: L1722742-05
 Client ID: SS105
 Sample Location: JAFFREY, NH
 Matrix: Soil
 Percent Solids: 67%

Date Collected: 06/28/17 14:25
 Date Received: 07/05/17
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	797		mg/kg	2.99	0.160	1	07/06/17 09:15	07/07/17 02:22	EPA 3050B	1,6010C	MC



Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

SAMPLE RESULTS

Lab ID: L1722742-06
 Client ID: SS106
 Sample Location: JAFFREY, NH
 Matrix: Soil
 Percent Solids: 62%

Date Collected: 06/28/17 14:30
 Date Received: 07/05/17
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	1730		mg/kg	3.14	0.168	1	07/06/17 09:15	07/07/17 02:26	EPA 3050B	1,6010C	MC



Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

SAMPLE RESULTS

Lab ID: L1722742-07
 Client ID: SS-DUP
 Sample Location: JAFFREY, NH
 Matrix: Soil
 Percent Solids: 90%

Date Collected: 06/28/17 14:35
 Date Received: 07/05/17
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	33.4		mg/kg	2.20	0.118	1	07/06/17 09:15	07/07/17 02:31	EPA 3050B	1,6010C	MC



Project Name: FORMER WW CROSS PROPERTY

Lab Number: L1722742

Project Number: 141.05051.010.02

Report Date: 07/13/17

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-07 Batch: WG1020002-1									
Lead, Total	ND	mg/kg	2.00	0.107	1	07/06/17 08:28	07/06/17 23:46	1,6010C	MC

Prep Information

Digestion Method: EPA 3050B

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER WW CROSS PROPERTY

Lab Number: L1722742

Project Number: 141.05051.010.02

Report Date: 07/13/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-07 Batch: WG1020002-2 SRM Lot Number: D093-540								
Lead, Total	99		-		82-117	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: FORMER WW CROSS PROPERTY

Lab Number: L1722742

Project Number: 141.05051.010.02

Report Date: 07/13/17

<u>Parameter</u>	<u>Native Sample</u>	<u>MS Added</u>	<u>MS Found</u>	<u>MS %Recovery</u>	<u>Qual</u>	<u>MSD Found</u>	<u>MSD %Recovery</u>	<u>Qual</u>	<u>Recovery Limits</u>	<u>RPD</u>	<u>Qual</u>	<u>RPD Limits</u>
Total Metals - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG1020002-3 WG1020002-4 QC Sample: L1722538-03 Client ID: MS Sample												
Lead, Total	547.	46.5	510	0	Q	549	4	Q	75-125	7		20

INORGANICS & MISCELLANEOUS

Project Name: FORMER WW CROSS PROPERTY**Lab Number:** L1722742**Project Number:** 141.05051.010.02**Report Date:** 07/13/17**SAMPLE RESULTS**

Lab ID: L1722742-01

Date Collected: 06/28/17 14:00

Client ID: SS101

Date Received: 07/05/17

Sample Location: JAFFREY, NH

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	66.2		%	0.100	NA	1	-	07/06/17 11:55	121,2540G	RI



Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

SAMPLE RESULTS

Lab ID: L1722742-02
Client ID: SS102
Sample Location: JAFFREY, NH
Matrix: Soil

Date Collected: 06/28/17 14:10
Date Received: 07/05/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.2		%	0.100	NA	1	-	07/06/17 11:55	121,2540G	RI



Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

SAMPLE RESULTS

Lab ID: L1722742-03
Client ID: SS103
Sample Location: JAFFREY, NH
Matrix: Soil

Date Collected: 06/28/17 14:16
Date Received: 07/05/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.2		%	0.100	NA	1	-	07/06/17 11:55	121,2540G	RI



Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

SAMPLE RESULTS

Lab ID: L1722742-04
Client ID: SS104
Sample Location: JAFFREY, NH
Matrix: Soil

Date Collected: 06/28/17 14:20
Date Received: 07/05/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	77.5		%	0.100	NA	1	-	07/06/17 11:55	121,2540G	RI



Project Name: FORMER WW CROSS PROPERTY**Lab Number:** L1722742**Project Number:** 141.05051.010.02**Report Date:** 07/13/17**SAMPLE RESULTS**

Lab ID: L1722742-05

Date Collected: 06/28/17 14:25

Client ID: SS105

Date Received: 07/05/17

Sample Location: JAFFREY, NH

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	66.7		%	0.100	NA	1	-	07/06/17 11:55	121,2540G	RI



Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

SAMPLE RESULTS

Lab ID: L1722742-06
Client ID: SS106
Sample Location: JAFFREY, NH
Matrix: Soil

Date Collected: 06/28/17 14:30
Date Received: 07/05/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	61.8		%	0.100	NA	1	-	07/06/17 11:55	121,2540G	RI



Project Name: FORMER WW CROSS PROPERTY**Lab Number:** L1722742**Project Number:** 141.05051.010.02**Report Date:** 07/13/17**SAMPLE RESULTS**

Lab ID: L1722742-07

Date Collected: 06/28/17 14:35

Client ID: SS-DUP

Date Received: 07/05/17

Sample Location: JAFFREY, NH

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.9		%	0.100	NA	1	-	07/06/17 11:55	121,2540G	RI



Lab Duplicate Analysis

Batch Quality Control

Project Name: FORMER WW CROSS PROPERTY

Project Number: 141.05051.010.02

Lab Number: L1722742

Report Date: 07/13/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-07 QC Batch ID: WG1020053-1 QC Sample: L1722753-01 Client ID: DUP Sample						
Solids, Total	12.2	11.8	%	3		20

Project Name: FORMER WW CROSS PROPERTY**Lab Number:** L1722742**Project Number:** 141.05051.010.02**Report Date:** 07/13/17**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1722742-01A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.5	Y	Absent		PB-TI(180)
L1722742-01B	Plastic 2oz unpreserved for TS	A	NA		2.5	Y	Absent		TS(7)
L1722742-02A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.5	Y	Absent		PB-TI(180)
L1722742-02B	Plastic 2oz unpreserved for TS	A	NA		2.5	Y	Absent		TS(7)
L1722742-03A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.5	Y	Absent		PB-TI(180)
L1722742-03B	Plastic 2oz unpreserved for TS	A	NA		2.5	Y	Absent		TS(7)
L1722742-04A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.5	Y	Absent		PB-TI(180)
L1722742-04B	Plastic 2oz unpreserved for TS	A	NA		2.5	Y	Absent		TS(7)
L1722742-05A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.5	Y	Absent		PB-TI(180)
L1722742-05B	Plastic 2oz unpreserved for TS	A	NA		2.5	Y	Absent		TS(7)
L1722742-06A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.5	Y	Absent		PB-TI(180)
L1722742-06B	Plastic 2oz unpreserved for TS	A	NA		2.5	Y	Absent		TS(7)
L1722742-07A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.5	Y	Absent		PB-TI(180)
L1722742-07B	Plastic 2oz unpreserved for TS	A	NA		2.5	Y	Absent		TS(7)
L1722742-08A	Glass 60mL/2oz unpreserved	A	NA		2.5	Y	Absent		PCB-8082-CAULK(14)
L1722742-09A	Glass 60mL/2oz unpreserved	A	NA		2.5	Y	Absent		PCB-8082-CAULK(14)
L1722742-10A	Glass 60mL/2oz unpreserved	A	NA		2.5	Y	Absent		PCB-8082-CAULK(14)
L1722742-11A	Glass 60mL/2oz unpreserved	A	NA		2.5	Y	Absent		PCB-8082-CAULK(14)
L1722742-12A	Glass 60mL/2oz unpreserved	A	NA		2.5	Y	Absent		PCB-8082-CAULK(14)
L1722742-13A	Glass 60mL/2oz unpreserved	A	NA		2.5	Y	Absent		PCB-8082-CAULK(14)

Project Name: FORMER WW CROSS PROPERTY**Lab Number:** L1722742**Project Number:** 141.05051.010.02**Report Date:** 07/13/17

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related

Report Format: DU Report with 'J' Qualifiers



Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

Data Qualifiers

projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



Project Name: FORMER WW CROSS PROPERTY
Project Number: 141.05051.010.02

Lab Number: L1722742
Report Date: 07/13/17

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624: m/p-xylene, o-xylene

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 300: DW: Bromide

EPA 6860: NPW and SCM: Perchlorate

EPA 9010: NPW and SCM: Amenable Cyanide Distillation

EPA 9012B: NPW: Total Cyanide

EPA 9050A: NPW: Specific Conductance

SM3500: NPW: Ferrous Iron

SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO₂, NO₃.

SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility

SM 2540D: TSS

EPA 3005A NPW

EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, EPA 350.1: Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F, EPA 353.2:** Nitrate-N, **EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**

EPA 624: Volatile Halocarbons & Aromatics,

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E.**

Mansfield Facility:

Drinking Water

EPA 200.7: Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1 Hg.**

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



CHAIN OF CUSTODY

PAGE 1 OF 2

Date Rec'd in Lab: 07/05/17

ALPHA Job #: 1722740

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 Westboro, MA 01581
 Tel: 508-898-9220

320 Forbes Blvd
 Mansfield, MA 02048
 Tel: 508-822-9300

Project Information

Project Name: Former WW Ziggis Property
 Project Location: Joffrey, NH
 Project #: 141.05051.010.02
 Project Manager: John Ouellette
 ALPHA Quote #:

Report Information - Data Deliverables

ADEX EMAIL

Billing Information

Same as Client info PO #/10169

Client Information

Client: Ransom Consulting Inc
 Address: 42 Corporate Drive
 Portsmouth, NH 03801
 Phone: 603-436-1490
 Email: j.ouellette@ransomenv.com
 Additional Project Information:
 Bonnie Best @ ransomenv.com
 Analytical Level = Level II
 Data Evaluation Tier = Tier I Plus

Regulatory Requirements & Project Information Requirements

Standard RUSH (only confirmed if pre-approved)
 Date Due:

Yes No MA MCP Analytical Methods Yes No CT RCP Analytical Methods
 Yes No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
 Yes No GW1 Standards (Info Required for Metals & EPH with Targets) **Brownfield**
 Yes No NPDES RCP
 Other State/Fed Program **PA/NH AES** Criteria **S-1 (Soil)**

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)
 Date Due:

ANALYSIS		SAMPLE INFO	
VOC: <input type="checkbox"/> 8260 <input type="checkbox"/> 824 <input type="checkbox"/> 524.2	SVOC: <input type="checkbox"/> ABN <input type="checkbox"/> PAH	Filtration	<input type="checkbox"/> Field <input type="checkbox"/> Lab to do
METALS: <input type="checkbox"/> MCP 13 <input type="checkbox"/> MCP 14 <input type="checkbox"/> RCP 15	METALS: <input type="checkbox"/> RCRA5 <input type="checkbox"/> RCRA8 <input type="checkbox"/> PP13	Preservation	<input type="checkbox"/> Lab to do
EPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	Sample Comments	
<input checked="" type="checkbox"/> PCB	TPH: <input type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint		

Total Lead to Lab

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials
		Date	Time		
22740-01	SS101	0-28-17	14:00	S	DAF
02	SS102		14:10		
03	SS103		14:16		
04	SS104		14:20		
05	SS105		14:25		
06	SS106		14:30		
07	SS-DUP		14:35		
08	PZB-01	0-28-17	8:20	X1	BAR
09	PZB-02		9:00		
10	PZB-03		10:30		

Container Type	Preservative	Container Type	Preservative
P= Plastic A= Amber glass V= Vial G= Glass B= Bacteria cup C= Cube O= Other E= Encore D= BOD Bottle	A= None B= HCl C= HNO ₃ D= H ₂ SO ₄ E= NaOH F= MeOH G= NaHSO ₄ H= Na ₂ S ₂ O ₃ I= Ascorbic Acid J= NH ₄ Cl K= Zn Acetate O= Other		

Relinquished By:	Date/Time	Received By:	Date/Time
<i>[Signature]</i>	7-5-17 14:32	<i>[Signature]</i>	7-5-17 14:32
	7-5-17 10:15		7-5-17 10:15

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.
 FORM NO: 01-01 (rev. 12-Mar-2012)

TOTAL # BOTTLES

Weston & Sampson Engineers, Inc.
BID
January 15, 2025

Town of Jaffrey
Abatement and Demolition of Former W.W. Cross Property
IFB #2025-1

Appendix B – U.S. Environmental Protection Agency Cooperative Agreement

	U.S. ENVIRONMENTAL PROTECTION AGENCY Cooperative Agreement	GRANT NUMBER (FAIN): 00A01758 MODIFICATION NUMBER: 0 PROGRAM CODE: 4B	DATE OF AWARD 08/07/2024
		TYPE OF ACTION New	MAILING DATE 08/12/2024
		PAYMENT METHOD: ASAP	ACH# 10396
		RECIPIENT TYPE: Municipal	
RECIPIENT: TOWN OF JAFFREY TOWN HALL 10 Goodnow Street Jaffrey, NH 03452-5415 EIN: 02-6000435		PAYEE: TOWN OF JAFFREY TOWN HALL 10 Goodnow Street Jaffrey, NH 03452	
PROJECT MANAGER Jo Anne Carr 10 Goodnow Street Jaffrey, NH 03452 Email: JACarr@townofjaffrey.com Phone: 603-532-7880		EPA PROJECT OFFICER Chris Lombard 5 Post Office Square, Suite 100 Boston, MA 02109 Email: Lombard.Chris@epa.gov Phone: 617-918-1305	
		EPA GRANT SPECIALIST Trevor Tavano Grants Management Branch 5 Post Office Square, Suite 100 Boston, MA 02109 Email: Tavano.Trevor@epa.gov Phone: 617-918-1235	
PROJECT TITLE AND DESCRIPTION Cleanup Cooperative Agreement for Town of Jaffrey Brownfields are real property, the expansion, development or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. This agreement will provide funding under the Infrastructure Investment and Jobs Act to the Town of Jaffrey, New Hampshire to conduct remediation activities as authorized by CERCLA 104(k)(3) in Jaffrey, New Hampshire. Specifically, this agreement will provide funding to the recipient to clean up a brownfield site. Additionally, the recipient will competitively procure (as needed) and direct a Qualified Environmental Professional to conduct environmental site activities, will create a community involvement plan and administrative record for the site, and will report on interim progress and final accomplishments by completing and submitting relevant portions of the Property Profile Form using EPA's Assessment, Cleanup and Redevelopment Exchange System (ACRES). Further, the recipient will remediate 1 brownfield site and anticipates holding up to 3 community meetings, finalizing 1 Analysis of Brownfield Cleanup Alternatives, and submitting 16 quarterly reports. Work conducted under this agreement will benefit the residents, business owners, and stakeholders in Jaffrey, New Hampshire. No subawards are included in this assistance agreement.			
BUDGET PERIOD 07/01/2024 - 09/30/2028	PROJECT PERIOD 07/01/2024 - 09/30/2028	TOTAL BUDGET PERIOD COST \$ 2,019,400.00	TOTAL PROJECT PERIOD COST \$ 2,019,400.00
NOTICE OF AWARD Based on your Application dated 11/10/2023 including all modifications and amendments, the United States acting by and through the US Environmental Protection Agency (EPA) hereby awards \$ 2,019,400.00. EPA agrees to cost-share 100.00% of all approved budget period costs incurred, up to and not exceeding total federal funding of \$ 2,019,400.00. Recipient's signature is not required on this agreement. The recipient demonstrates its commitment to carry out this award by either: 1) drawing down funds within 21 days after the EPA award or amendment mailing date; or 2) not filing a notice of disagreement with the award terms and conditions within 21 days after the EPA award or amendment mailing date. If the recipient disagrees with the terms and conditions specified in this award, the authorized representative of the recipient must furnish a notice of disagreement to the EPA Award Official within 21 days after the EPA award or amendment mailing date. In case of disagreement, and until the disagreement is resolved, the recipient should not draw down on the funds provided by this award/amendment, and any costs incurred by the recipient are at its own risk. This agreement is subject to applicable EPA regulatory and statutory provisions, all terms and conditions of this agreement and any attachments.			
ISSUING OFFICE (GRANTS MANAGEMENT OFFICE)		AWARD APPROVAL OFFICE	
ORGANIZATION / ADDRESS U.S. EPA, Region 1, EPA New England 5 Post Office Square, Suite 100 Boston, MA 02109-3912		ORGANIZATION / ADDRESS U.S. EPA, Region 1, EPA New England R1 - Region 1 5 Post Office Square, Suite 100 Boston, MA 02109-3912	
THE UNITED STATES OF AMERICA BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY			
Digital signature applied by EPA Award Official Arthur Johnson - Director, Mission Support Division			DATE 08/07/2024

EPA Funding Information

FUNDS	FORMER AWARD	THIS ACTION	AMENDED TOTAL
EPA Amount This Action	\$ 0	\$ 2,019,400	\$ 2,019,400
EPA In-Kind Amount	\$ 0	\$ 0	\$ 0
Unexpended Prior Year Balance	\$ 0	\$ 0	\$ 0
Other Federal Funds	\$ 0	\$ 0	\$ 0
Recipient Contribution	\$ 0	\$ 0	\$ 0
State Contribution	\$ 0	\$ 0	\$ 0
Local Contribution	\$ 0	\$ 0	\$ 0
Other Contribution	\$ 0	\$ 0	\$ 0
Allowable Project Cost	\$ 0	\$ 2,019,400	\$ 2,019,400

Assistance Program (CFDA)	Statutory Authority	Regulatory Authority
66.818 - Brownfields Multipurpose, Assessment, Revolving Loan Fund, and Cleanup Cooperative Agreements	CERCLA: Secs. 104(k)(3) & 104(k)(5)(E) & 104(k)(10)(B)(iii) & Infrastructure Investment and Jobs Act (IIJA) (PL 117-58)	2 CFR 200, 2 CFR 1500 and 40 CFR 33

Fiscal									
Site Name	Req No	FY	Approp. Code	Budget Organization	PRC	Object Class	Site/Project	Cost Organization	Obligation / Deobligation
JAFFREY	24010CG019	24	E4SD	0140AG7	000D79X89	4114	-	-	\$ 2,019,400
									\$ 2,019,400

Budget Summary Page

Table A - Object Class Category (Non-Construction)	Total Approved Allowable Budget Period Cost
1. Personnel	\$ 16,800
2. Fringe Benefits	\$ 6,720
3. Travel	\$ 4,000
4. Equipment	\$ 0
5. Supplies	\$ 600
6. Contractual	\$ 101,280
7. Construction	\$ 1,890,000
8. Other	\$ 0
9. Total Direct Charges	\$ 2,019,400
10. Indirect Costs: 0.00 % Base -	\$ 0
11. Total (Share: Recipient <u>0.00</u> % Federal <u>100.00</u> %)	\$ 2,019,400
12. Total Approved Assistance Amount	\$ 2,019,400
13. Program Income	\$ 0
14. Total EPA Amount Awarded This Action	\$ 2,019,400
15. Total EPA Amount Awarded To Date	\$ 2,019,400

Administrative Conditions

National Administrative Terms and Conditions

The recipient agrees to comply with the current EPA general terms and conditions available at: <https://www.epa.gov/grants/epa-general-terms-and-conditions-effective-october-1-2023-or-later>.

These terms and conditions are in addition to the assurances and certifications made as a part of the award and the terms, conditions, or restrictions cited throughout the award.

The EPA repository for the general terms and conditions by year can be found at: <https://www.epa.gov/grants/grant-terms-and-conditions#general>.

A. Correspondence Condition

The terms and conditions of this agreement require the submittal of reports, specific requests for approval, or notifications to EPA. Unless otherwise noted, all such correspondence should be sent to the following email addresses:

- Federal Financial Reports (SF-425): rtpfc-grants@epa.gov
- MBE/WBE reports (EPA Form 5700-52A): **Grants Specialist on Page 1 of Award Document AND Larry Wells, Disadvantaged Business Utilization Program Manager: r1_mbewbereport@epa.gov**
- All other forms/certifications/assurances, Indirect Cost Rate Agreements, Requests for Extensions of the Budget and Project Period, Amendment Requests, Requests for other Prior Approvals, updates to recipient information (including email addresses, changes in contact information or changes in authorized representatives) and other notifications: **Grants Specialist and Project Officer on Page 1 of Award Document**
- Workplan revisions, equipment lists, programmatic reports and deliverables: **Project Officer on Page 1 of Award Document**
- Quality Assurance documents, **Project Officer on Page 1 of Award Document AND R1QAPPs@epa.gov**

B. Pre-Award Costs

In accordance with 2 CFR 1500.9, the recipient may charge otherwise allowable pre-award costs (both Federal and non-Federal matching shares) incurred from **07/01/2024** to the actual award date provided that such costs were contained in the approved application and all costs are incurred within the approved budget period.

C. New Recipient Training Requirement

The recipient agrees to complete the [EPA Grants Management Training for Applicants and Recipients](#) and the [How to Develop a Budget](#) training within 90 calendar days of the date of award of this agreement. The recipient must notify the Grant Specialist via email when the required training is complete. For additional information on this training requirement, the recipient should refer to [RAIN-2024-G01](#).

Programmatic Conditions

FY24 Brownfields Cleanup Cooperative Agreement

Infrastructure Investment and Jobs Act Funds

Terms and Conditions

Please note that these Terms and Conditions (T&Cs) apply to Brownfield Cleanup Cooperative Agreements awarded under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) § 104(k) and the Infrastructure Investment and Jobs Act (IIJA).

I. GENERAL FEDERAL REQUIREMENTS

A. Federal Policy and Guidance

1. Cooperative Agreement Recipients: By awarding this cooperative agreement, the Environmental Protection Agency (EPA) has approved the application for the Cooperative Agreement Recipient (CAR) submitted in the Fiscal Year 2024 (FY24) competition for Brownfield Cleanup cooperative agreements. EPA's approval of the FY24 application indicates that the CAR is in compliance with the Site Characterization requirement (as outlined in Section III.B.9. of the FY24 Cleanup Grant Guidelines) and has provided information to EPA that demonstrates that a sufficient level of site characterization from environmental site assessments have been performed for the remediation work to begin on the site(s) subject to this agreement.
2. In implementing this agreement, the CAR shall ensure that work done with cooperative agreement funds complies with the requirements of CERCLA § 104(k). The CAR shall also ensure that cleanup activities supported with cooperative agreement funding comply with all applicable federal and state laws and regulations. The CAR must ensure cleanups are protective of human health and the environment.
3. The CAR must consider whether it is required to conduct cleanups through a State or Tribal response program. If the CAR chooses not to participate in a State or Tribal response program, then the CAR is required to consult with the EPA Project Officer to ensure the proposed cleanup is protective of human health and the environment.

If the State or Tribe does not have a promulgated response program that is applicable to the planned brownfield activity, then the CAR is required to consult with the EPA Project Officer to ensure the protectiveness of human health and the environment.

4. A term and condition or other legally binding provision shall be included in all subawards entered into with the funds awarded under this agreement, or when funds awarded under this agreement are used in combination with non-federal sources of funds, to ensure that the CAR complies with all applicable federal and state laws and requirements. In addition to CERCLA § 104(k), applicable federal laws and requirements include 2 CFR Part 200.

5. The CAR must comply with federal cross-cutting requirements. These requirements include, but are not limited to, DBE requirements found at 40 CFR Part 33; OSHA Worker Health & Safety Standard 29 CFR § 1910.120; Uniform Relocation Act (40 USC § 61); National Historic Preservation Act (16 USC § 470); Endangered Species Act (P.L. 93-205); Permits required by Section 404 of the Clean Water Act; Executive Order 11246, Equal Employment Opportunity, and implementing regulations at 41 CFR § 60-4; Contract Work Hours and Safety Standards Act, as amended (40 USC §§ 327-333); the Anti-Kickback Act (40 USC § 3145); and Section 504 of the Rehabilitation Act of 1973 as implemented by Executive Orders 11914 and 11250. For additional information on cross-cutting requirements visit <https://www.epa.gov/grants/epa-subaward-cross-cutter-requirements>.

6. The CAR must comply with Davis-Bacon Act prevailing wage requirements and associated U.S. Department of Labor (DOL) regulations for all construction, alteration, and repair contracts and subcontracts awarded with funds provided under this agreement by operation of CERCLA § 104(g). For more detailed information on complying with Davis-Bacon, please see the [Contract Provisions for Davis-Bacon and Related Acts](#) and the Brownfields Davis-Bacon terms and conditions.

7. Refer to the General Term & Conditions for Buy America Sourcing requirements under the Build America, Buy America (BABA) provisions of the Infrastructure Investment and Jobs Act (IIJA; also known as Bipartisan Infrastructure Law or BIL) (P.L. 117-58, §§70911-70917). The CAR can also refer to EPA's [Frequently Asked Questions for BABA](#) for more information.

8. The recipient agrees to have financial management and programmatic management systems in place to:

- a. Track and report on expenditures of IIJA funds.
- b. Track and report outputs and outcomes achieved with IIJA funds.

II. SITE OWNERSHIP/RECIPIENT ELIGIBILITY REQUIREMENTS

A. Site Ownership

1. The CAR may only clean up the site(s) it solely owns that is specified in the workplan for this cooperative agreement. The CAR must retain ownership of the site(s) while Brownfield Cleanup Grant funds are disbursed for the cleanup of the site(s) and must consult with the EPA Project Officer prior to transferring title or otherwise conveying the real property comprising the site(s). For the purposes of this agreement, the term “owns” means fee simple title unless the EPA previously approved a different ownership arrangement.

B. Continuing Obligations for CARs

1. EPA awarded this cooperative agreement to the CAR based on information indicating that the CAR would not use cooperative agreement funds to pay for a response cost at the site for which the CAR was potentially liable under CERCLA § 107. The CAR must demonstrate that it meets the requirements for one of the Landowner Liability Protections as either a Bona Fide Prospective Purchaser (BFPP), Contiguous Property Owner (CPO), or Innocent Landowner (ILO). These requirements include certain threshold criteria and continuing obligations that must be met in order for the CAR to maintain its eligible status. If the CAR fails to meet these obligations, EPA may disallow the costs incurred under this cooperative agreement for cleaning up the site under CERCLA § 104(k)(8)(C). The Landowner Liability Protection requirements include:

a. Performing “all appropriate inquiries” into the previous ownership and uses of the property before acquiring the property.

b. Not being potentially liable or affiliated with any other person who is potentially liable for response costs at the site through any direct or indirect familial relationship, any contractual, corporate, or financial relationship, or through the result of a reorganized business entity that was potentially liable.

While not necessary to obtain ILO protection, the CAR must still establish by a preponderance of the evidence that the act or omission that caused the release or threat of release of hazardous substances and any resulting damages were caused by a third party with whom the person does not have an employment, agency, or contractual relationship.

c. Demonstrating that no disposal of hazardous substances occurred at the facility after acquisition by the landowner (does not specifically apply for the CPO protection).

d. Taking “reasonable steps” with respect to hazardous substance releases by stopping any continuing releases, preventing any threatened future releases, and preventing or limiting human, environmental, or

natural resource exposure to any previously released hazardous substance.

e. Complying with any land use restrictions established or relied on in connection with the response action at the site and not impeding the effectiveness or integrity of institutional controls employed in connection with the response action.

f. Providing full cooperation, assistance, and access to persons that are authorized to

conduct response actions or natural resource restoration at the site from which there has been a release or threatened release.

g. Complying with information requests and administrative subpoenas (does not specifically apply for the ILO protection).

h. Providing all legally required notices with respect to the discovery or release of any hazardous substances at the site (does not specifically apply for the ILO protection).

Notwithstanding the CAR's continuing obligations under this agreement, the CAR is subject to the applicable liability provisions of CERCLA governing its status as a BFPP, CPO, or ILO. CERCLA requires additional obligations to maintain the liability limitations for BFPP, CPO, and ILO; the relevant provisions for these obligations include §§ 101(35), 101(40), 107(b), 107(q) and 107(r).

CARs that are exempt from CERCLA liability or do not have to meet the requirements for asserting an affirmative defense to CERCLA liability must also comply with continuing obligation items c.-h.

C. Site Substitution and Cleanup Method Changes

1. The CAR must use funds provided by this agreement to clean up the brownfield site(s) in the EPA-approved workplan. The CAR shall not substitute a different brownfield site.

2. The CAR shall not make substantial changes to the cleanup method described in the workplan, including changes to the expected cleanup based on public comment or other reasons, without prior EPA approval.

III. GENERAL COOPERATIVE AGREEMENT

ADMINISTRATIVE REQUIREMENTS

A. Sufficient Progress

1. This condition supplements the requirements of the Termination and Sufficient Progress Conditions in the General Terms and Conditions.

The EPA Project Officer will assess whether the recipient is making sufficient progress in implementing its cooperative agreement 18 months and 30 months from the date of award. If EPA determines that the CAR has not made sufficient progress in implementing its cooperative agreement, the CAR, if directed to do so, must implement a corrective action plan concurred on by the EPA Project Officer and approved by the Grants Management Officer or Award Official. Alternatively, EPA may terminate this agreement under 2 CFR § 200.340 for material non-compliance with its terms, or with the consent of the CAR as provided at 2 CFR § 200.340, depending on the circumstances.

Sufficient progress at 18 months is indicated when:

- an appropriate remediation plan is in place, institutional control development (if necessary) has commenced;
- initial community engagement activities have taken place;
- relevant state or tribal pre-cleanup requirements are being addressed;
- a Qualified Environmental Professional has been procured; and
- a solicitation for remediation services has been issued.

Sufficient progress at 30 months is indicated when:

- at least 50% of the site-specific activities have been completed and funds have been requested by and disbursed to the CAR;
- a Quality Assurance Project Plan has been approved by EPA; and
- other documented activities have occurred that demonstrate to EPA's satisfaction that the CAR will successfully perform the cooperative agreement.

B. Substantial Involvement

1. The EPA Project Officer will be substantially involved in overseeing and monitoring this cooperative agreement. Substantial involvement, includes, but is not limited to:

- a. Close monitoring of the CAR's performance to verify compliance with the EPA-approved workplan and achievement of environmental results.
- b. Participation in periodic telephone conference calls to share ideas, project successes and challenges, etc., with EPA.
- c. Reviewing and commenting on quarterly and annual reports prepared under the cooperative agreement (the final decision on the content of reports rests with the recipient or subrecipients receiving pass-through awards).
- d. Reviewing and approving Quality Assurance Project Plans and related documents or verifying that appropriate Quality Assurance requirements have been met where quality assurance activities are being conducted pursuant to an EPA-approved Quality Assurance Management Plan.

Substantial involvement may also include, depending on the direction of the EPA Project Officer:

- e. Collaboration during the performance of the scope of work including participation in project activities, to the extent permissible under EPA policies. Examples of collaboration include:
 - i. Consultation between EPA staff and the CAR on effective methods of carrying out the scope of work provided the CAR makes the final decision on how to perform authorized activities.
 - ii. Advice from EPA staff on how to access publicly available information on EPA or other federal agency websites.

iii. With the consent of the CAR, EPA staff may provide technical advice to the CAR's contractors or subrecipients provided the CAR approves any expenditures of funds necessary to follow advice from EPA staff. (The CAR remains accountable for performing contract and subaward management as specified in 2 CFR § 200.318 and 2 CFR § 200.332 as well as the terms of the EPA cooperative agreement.)

iv. EPA staff participation in meetings, webinars, and similar events upon the request of the CAR or in connection with a co-sponsorship agreement.

f. Reviewing and approving that the Analysis of Brownfield Cleanup Alternatives (ABCA), or equivalent state Brownfields program document, meets the Brownfields Program's requirements for an ABCA.

g. Reviewing proposed procurements in accordance with 2 CFR § 200.325, as well as the substantive terms of proposed contracts or subawards as appropriate. This may include reviewing requests for proposals, invitations for bid, scopes of work and/or plans and specifications for contracts over \$250,000 prior to advertising for bids.

h. Reviewing the qualifications of key personnel. (EPA does not have the authority to select employees or contractors, including consultants, employed by the CAR or subrecipients receiving pass-through awards.)

i. Reviewing information in performance reports to ensure all costs incurred by the CAR and/or its contractor(s) if needed to ensure appropriate expenditure of grant funds.

EPA may waive any of the provisions in Section III.B.1. The EPA Project Officer will provide waivers to provisions a. – d. in Section III.B.1. in writing.

2. Effects of EPA's substantial involvement include:

a. EPA's review of any project phase, document, or cost incurred under this cooperative agreement will not have any effect upon CERCLA § 128 *Eligible Response Site* determinations or rights, authorities, and actions under CERCLA or any federal statute.

b. The CAR remains responsible for ensuring that all cleanups are protective of human health and the

environment and comply with all applicable federal and state laws. If changes to the expected cleanup become necessary based on public comment or other reasons, the CAR must consult with the EPA Project Officer and the State.

- c. The CAR and its subrecipients remain responsible for ensuring costs are allowable under 2 CFR Part 200, Subpart E.

C. Cooperative Agreement Recipient Roles and Responsibilities

1. CARs, other than state entities, that procure a contractor(s) (including consultants) where the contract will be more than the micro-purchase threshold in 2 CFR § 200.320(a)(1) (\$10,000 for most CARs) must select the contractor(s) in compliance with the fair and open competition requirements in 2 CFR Part 200 and 2 CFR Part 1500. This requirement also applies to procurement processes that were completed before the award of this cooperative agreement. See the [Brownfields Grants: Guidance on Competitively Procuring a Contractor](#) for additional information.

CARs may procure multiple contractors to ensure the appropriate expertise is in place to perform work under the agreement (e.g., expertise to conduct site remediation activities vs. community engagement) and to allow the ability for work be performed concurrently at multiple sites.

2. The CAR must acquire the services of a Qualified Environmental Professional(s) as defined in 40 CFR § 312.10, if it does not have such a professional on staff to coordinate, direct, and oversee the brownfield site cleanup activities at a given site.

3. Cybersecurity – The recipient agrees that when collecting and managing environmental data under this cooperative agreement, it will protect the data by following all applicable State or Tribal law cybersecurity requirements.

- a. EPA must ensure that any connections between the recipient's network or

information system and EPA networks used by the recipient to transfer data under this agreement are secure. For purposes of this section, a connection is defined as a dedicated persistent interface between an Agency IT system and an external IT system for the purpose of transferring information. Transitory, user-controlled connections such as website browsing are excluded from this definition.

If the recipient's connections as defined above do not go through the Environmental

Information Exchange Network or EPA's Central Data Exchange, the recipient agrees to contact the EPA Project Officer no later than 90 days after the date of this award and work with the designated Regional/Headquarters Information Security Officer to ensure that the connections meet EPA security requirements, including entering into Interconnection Service Agreements as appropriate. This condition does not apply to manual entry of data by the recipient into systems operated and used by EPA's regulatory programs for the submission of reporting and/or compliance data.

b. The recipient agrees that any subawards it makes under this agreement will require the subrecipient to comply with the requirements in Cybersecurity Section a. above if the subrecipient's network or information system is connected to EPA networks to transfer data to the Agency using systems other than the Environmental Information Exchange Network or EPA's Central Data Exchange. The recipient will be in compliance with this condition: by including this requirement in subaward agreements; and during subrecipient monitoring deemed necessary by the recipient under 2 CFR § 200.332(d), by inquiring whether the subrecipient has contacted the EPA Project Officer. Nothing in this condition requires the recipient to contact the EPA Project Officer on behalf of a subrecipient or to be involved in the negotiation of an Interconnection Service Agreement between the subrecipient and EPA.

4. All geospatial data created must be consistent with Federal Geographic Data Committee (FGDC) endorsed standards. Information on these standards may be found at www.fgdc.gov.

D. Quarterly Performance Reports

1. In accordance with EPA regulations 2 CFR Parts 200 and 1500 (specifically, § 200.329, *Monitoring and Reporting Program Performance*), the CAR agrees to submit quarterly performance reports to the EPA Project Officer within 30 days after each reporting period. Initially, quarterly performance reports will be submitted via email or via the optional Quarterly Reporting function tool within the Assessment, Cleanup and Redevelopment Exchange System (ACRES). The EPA Project Officer will notify the CAR when use of the Quarterly Performance tool within ACRES is required. Once the EPA Project Officer notifies the CAR of required use, the CAR agrees to use this tool to input quarterly performance reports directly into ACRES within 30 days after each reporting period. The reporting periods are October 1 – December 31 (1st quarter); January 1 – March 31 (2nd quarter); April 1 – June 30 (3rd quarter); and July 1 – September 30 (4th quarter). If a due date falls on a weekend or holiday, the report will be due on the next business day.

These reports shall cover work status, work progress, difficulties encountered, preliminary data results and a statement of activity anticipated during the subsequent reporting period, including a description of equipment, techniques, and materials to be used or evaluated. A discussion of expenditures and financial status for each workplan task, along with a comparison of the percentage of the project completed to the project schedule and an explanation of significant discrepancies from the EPA-approved workplan and budget shall be included in the report. The report shall also include any changes of key personnel concerned with the project that were approved by the EPA Grants Management Officer or Award Official. (Note, as provided at 2 CFR § 200.308, *Revision of budget*

and program, the CAR must seek prior approval from the EPA Grants Management Officer or Award Official for a change in a key person.)

2. The CAR must submit performance reports on a quarterly basis in ACRES using the Cleaning Quarterly Report function. Quarterly performance reports must include:

- a. A summary that clearly differentiates between activities completed with EPA funds provided under the Brownfield Cleanup cooperative agreement and related activities completed with other sources of leveraged funding.
- b. A summary and status of approved activities performed during the reporting quarter; a summary of the performance outputs/outcomes achieved during the reporting quarter; and a description of problems encountered during the reporting quarter that may affect the project schedule.
- c. A comparison of actual accomplishments to the anticipated outputs/outcomes specified in the EPA-approved workplan and reasons why anticipated outputs/outcomes were not met.
- d. An update on the project schedule and milestones, including an explanation of any discrepancies from the EPA-approved workplan.
- e. A budget summary table with the following information: current approved project budget; EPA funds drawn down during the reporting quarter; costs drawn down to date (cumulative expenditures); program income generated and used (if applicable); and total remaining funds. The budget summary table must include costs that are charged to the “other” budget object class category (e.g., subawards, etc.).

The CAR shall include an explanation of any discrepancies in the budget from the EPA-approved workplan, cost overruns or high unit costs, and other pertinent information. The CAR shall include a statement on funding transfers^[1] among direct budget categories or programs, functions and activities that occurred during the quarter and cumulatively during the period of performance.

Note: ACRES reporting requirements can change over time, based on expansion of EPA's information collection authority, and the CAR is responsible for complying with the latest ACRES reporting requirements at the time of each quarterly performance report. The EPA Project Officer will notify the CAR when ACRES reporting

requirements, specific to Brownfields Cleanup, change.

- f. For local governments that are using cooperative agreement funds for health monitoring, the quarterly report must also include the specific budget, the quarterly expenditure, and cumulative expenditures to demonstrate that 10% of federal funding is not exceeded.

Note: Each property where cleanup activities were performed and/or completed must have its corresponding information updated in ACRES prior to submitting the quarterly performance report (see Section III.E. below).

E. Property Profile Submission

1. The CAR must report on interim progress (e.g., clean up started) and any final accomplishments (e.g., clean up completed, contaminants removed, institutional controls required, engineering controls required) by completing and submitting relevant portions of the electronic Property Profile Form using the Assessment, Cleanup and Redevelopment Exchange System (ACRES). The CAR must enter the data in ACRES as soon as the interim action or final accomplishment has occurred, or within 30 days after the end of each reporting quarter. The CAR must enter any new data into ACRES prior to submitting the quarterly performance report to the EPA Project Officer. The CAR must utilize the electronic version of the Property Profile Form.

F. Final Cooperative Agreement Performance Report with Environmental Results

1. In accordance with EPA regulations 2 CFR Parts 200 and 1500 (specifically, § 200.329, *Monitoring and Reporting Program Performance* and 2 CFR § 200.344(a), *Closeout*), the CAR agrees to submit to the EPA Project Officer within 120 days after the expiration or termination of the approved project period a final performance report on the cooperative agreement via email; unless the EPA Project Officer agrees to accept a paper copy of the report. The final performance report shall document and summarize the elements listed in Section III.D.2., as appropriate, for activities that occurred over the entire project period.

IV. FINANCIAL ADMINISTRATION REQUIREMENTS

A. Cost Share Requirement

1. As provided in IJJA, no cost share is required for this agreement.

B. Eligible Uses of the Funds for the Cooperative Agreement Recipient

1. To the extent allowable under the EPA-approved workplan, cooperative agreement funds may be used for eligible programmatic expenses necessary to clean up sites. Eligible programmatic expenses include activities described in Section V. of these Terms and Conditions. In addition, eligible programmatic expenses may include:

- a. Ensuring cleanup activities at a particular site are authorized by CERCLA § 104(k) and the EPA-approved workplan.
- b. Ensuring that a cleanup complies with applicable requirements under federal and state laws, as required by CERCLA § 104(k).
- c. Preparing and updating an Analysis of Brownfield Cleanup Alternatives (ABCA) which will include information about the site and contamination issues, cleanup standards, applicable laws, alternatives considered, and the proposed cleanup.
- d. Using up to \$50,000 of the cooperative agreement funds to conduct unforeseen environmental site assessment activities only when:
 - i. the state or tribal environmental authority requires additional site characterization in order to move forward with the remediation, as provided at CERCLA § 104(k)(10)(B)(i)(I); or

the site is not enrolled in the State or Tribal response program and the Environmental Professional recommends, in writing, additional site characterization in order to move forward with the remediation, as provided at CERCLA § 104(k)(10)(B)(i)(I); and
 - ii. the CAR has exhausted available resources to conduct the environmental site assessment, including the resources described in the FY24 application.

The CAR must obtain written approval from the EPA Project Officer to use funding from this cooperative agreement to characterize the site.

- e. Developing a Quality Assurance Project Plan (QAPP) as required by 2 CFR § 1500.12. The specific requirement for a QAPP is outlined in *Implementation of Quality Assurance Requirements for Organizations Receiving EPA Financial Assistance* available at <https://www.epa.gov/grants/implementation-quality-assurance-requirements-organizations-receiving-epa-financial>.
- f. Performing limited site characterization to confirm the effectiveness of the proposed cleanup design or the effectiveness of a cleanup once an action has been completed.
- g. Ensuring that public participation requirements are met. This includes preparing a Community Involvement Plan which will include reasonable notice, opportunity for public involvement and comment on the proposed cleanup, and response to comments.
- h. Establishing an Administrative Record.
- g. Using a portion of the cooperative agreement funds to purchase environmental insurance for the remediation of the site. [Funds shall not be used to purchase insurance intended to provide coverage for any of the ineligible uses under Section IV., *Ineligible Uses of the Funds for the Cooperative Agreement Recipient*.]
- j. Any other eligible programmatic costs, including direct costs incurred by the recipient in reporting to EPA; procuring and managing contracts; awarding, monitoring, and managing subawards to the extent required to comply with 2 CFR § 200.332 and the “Establishing and Managing Subawards” General Term and Condition; and carrying out community engagement pertaining to the cleanup activities.

2. **Local Governments Only** – If authorized in the EPA-approved workplan and budget narrative, up to 10% of the funds awarded by this agreement may be used by the CAR itself as a programmatic cost for Brownfield Program development and implementation of monitoring health conditions and institutional controls. The health monitoring activities must be associated with brownfield sites at which at least a Phase II environmental site assessment is conducted and is contaminated with hazardous substances. The CAR must maintain records on funds that will be used to carry out this task to ensure compliance with this requirement.

3. Under CERCLA § 104(k)(5)(E), CARs and subrecipients may use up to 5% of the sum of direct EPA funding for this cooperative agreement for administrative costs, including indirect costs under 2 CFR § 200.414. The limit on administrative costs for the CAR under this agreement is **\$100,970**. The total amount of indirect costs and any direct costs for cooperative agreement administration by the CAR paid for by EPA under the cooperative agreement shall not exceed this amount. Subrecipients may use up to 5% of the amount of Federal funds in their subawards for administrative costs. As required by 2 CFR § 200.403(d), the CAR and subrecipients must classify administrative

costs as direct or indirect consistently and shall not classify the same types of costs in both categories. The term “administrative costs” does not include:

- a. Investigation and identification of the extent of contamination of a brownfield site;
- b. design and performance of a response action; or
- c. monitoring of a natural resource.

Eligible cooperative agreement and subaward administrative costs subject to the 5% limitation include direct costs for:

- a. Costs incurred to comply with the following provisions of the *Uniform Administrative Requirements for Cost Principles and Audit Requirements for Federal Awards* at 2 CFR Parts 200 and 1500 other than those identified as programmatic.
 - i. Record-keeping associated with equipment purchases required under 2 CFR § 200.313;
 - ii. Preparing revisions and changes in the budgets, scopes of work, program plans and other activities required under 2 CFR § 200.308;
 - iii. Maintaining and operating financial management systems required under 2 CFR § 200.302;
 - iv. Preparing payment requests and handling payments under 2 CFR § 200.305;
 - v. Financial reporting under 2 CFR § 200.328;
 - vi. Non-federal audits required under 2 CFR Part 200, Subpart F; and

vii. Closeout under 2 CFR § 200.344 with the exception of preparing the recipient's final performance report. Costs for preparing this report are programmatic and are not subject to the 5% limitation on direct administrative costs.

b. Pre-award costs for preparation of the proposal and application for this cooperative agreement (including the final workplan) or applications for subawards are not allowable as direct costs but may be included in the CAR's or subrecipient's indirect cost pool to the extent authorized by 2 CFR § 200.460.

C. Ineligible Uses of the Funds for the Cooperative Agreement Recipient

1. Cooperative agreement funds shall not be used by the CAR for any of the following activities:

- a. Pre-cleanup Phase I and Phase II environmental site assessment activities with the exception of site monitoring activities that are reasonable and necessary during the cleanup process, including determination of the effectiveness of a cleanup;
- b. Monitoring and data collection necessary to apply for, or comply with, environmental permits under other federal and state laws, unless such a permit is required as a component of the cleanup action;
- c. Construction, demolition, and site development activities that are not cleanup actions (e.g., marketing of property (activities or products created specifically to attract buyers or investors), construction of a new facility, or addressing public or private drinking water supplies that have deteriorated through ordinary use);
- d. Job training activities unrelated to performing a specific cleanup at a site covered by the cooperative agreement;
- e. To pay for a penalty or fine;
- f. To pay a federal cost share requirement (e.g., a cost share required by another federal grant) unless there is specific statutory authority;

- g. To pay for a response cost at a brownfield site for which the CAR or subaward recipient is potentially liable under CERCLA § 107;
- h. To pay a cost of compliance with any federal law, excluding the cost of compliance with laws applicable to the cleanup; and
- i. Unallowable costs (e.g., lobbying and purchases of alcoholic beverages) under 2 CFR Part 200, Subpart E.

2. Cooperative agreement funds shall not be used for any of the following properties:

- a. Facilities listed, or proposed for listing, on the National Priorities List (NPL);
- b. Facilities subject to unilateral administrative orders, court orders, and administrative orders on consent or judicial consent decree issued to or entered by parties under CERCLA;
- c. Facilities that are subject to the jurisdiction, custody or control of the United States government except for land held in trust by the United States government for an Indian tribe; or
- d. A site excluded from the definition of a brownfield site for which EPA has not made a property-specific funding determination.

V. CLEANUP REQUIREMENTS

A. Authorized Cleanup Activities

1. The CAR shall prepare an Analysis of Brownfield Cleanup Alternatives (ABCA), or equivalent state Brownfields program document, which will include information about the site and contamination issues (i.e.,

exposure pathways, identification of contaminant sources, etc.); cleanup standards; applicable laws; alternatives considered; and the proposed cleanup. The evaluation of alternatives must include effectiveness, ability to implement, and the cost of the response proposed. The evaluation of alternatives must also consider the resilience of the remedial options to address potential adverse impacts caused by extreme weather events and changing climate conditions (e.g., sea level rise, drought, increased frequency and intensity of flooding, etc.). The alternatives may additionally consider the degree to which they reduce greenhouse gas discharges, reduce energy use or employ alternative energy sources, reduce volume of wastewater generated/disposed of, reduce volume of materials taken to landfills, and recycle and re-use materials generated during the cleanup process to the maximum extent practicable. The evaluation will include an analysis of reasonable alternatives including no action. The cleanup method chosen must be based on this analysis and documented in a decision document upon completion of the public comment period. The CAR must consult with the relevant state program (or EPA if there is not a state program that covers the site) to determine if the selected cleanup requires formal modification based on public comments or new information.

2. Prior to conducting or engaging in any on-site activity with the potential to impact historic properties (such as invasive sampling or cleanup), the CAR shall consult with the EPA Project Officer regarding potential applicability of the National Historic Preservation Act (NHPA) (16 USC § 470) and, if applicable, shall assist EPA in complying with any requirements of the NHPA and implementing regulations.

B. Quality Assurance (QA) Requirements

Authority: Quality Assurance applies to all assistance agreements involving environmental information as defined in [2 C.F.R. § 1500.12](#) Quality Assurance.

When environmental data are collected as part of the brownfield cleanup (e.g., cleanup verification sampling, post-cleanup confirmation sampling), the CAR shall comply with 2 CFR § 1500.12 requirements to develop and implement quality assurance practices sufficient to produce data adequate to meet project objectives and to minimize data loss. State law may impose additional QA requirements.

The recipient will develop Quality Assurance Project Plans (QAPP) for all applicable projects and tasks involving environmental information operations in accordance with the most current version of [EPA Quality Assurance Project Plan Standard](#). [Regional guidance documents](#) and [national guidance documents](#) may be helpful in meeting the requirements.

“Environmental information operations” is a collective term for work performed to collect, produce, evaluate, or use environmental information or the design, construction, operation, or application of environmental technology. For EPA, environmental information includes direct measurements of environmental parameters or processes, analytical testing of environmental conditions, information provided by models, information compiled from other sources such as databases, software applications, or existing literature, the development of environmental software,

tools, or models, or the design, construction, operation, or application of environmental technology.

The QAPP must be approved by EPA prior to environmental information operations, except under circumstances requiring immediate action to protect human health and the environment or operations conducted under police powers. Unless an alternate schedule has been agreed upon, QAPPs are to be submitted at least 60 days before project activities begin. QAPPs are submitted electronically to the following:

EPA Project Officer/Tribal Coordinator (see page 1 of assistance agreement for contact information) and Regional Quality Assurance Branch via R1QAPPs@epa.gov

For organizations with an EPA-approved Quality Management Plan (QMP), the recipient will submit an annual update letter to EPA documenting progress over the year and any changes to the QMP. Annual update letters will be sent every year for four years until the expiration of the QMP (five years from initial EPA approval). Annual QA update letters will be sent to the EPA Project Officer/Tribal Coordinator and the RQAM on the anniversary of the approval of the QMP by the RQAM; or on another mutually agreeable schedule.

For Reference:

- [Quality Management Plan \(QMP\) Standard and EPA's Quality Assurance Project Plan \(QAPP\) Standard](#); contain quality specifications for EPA and non-EPA organizations and definitions applicable to these terms and conditions.
- [EPA QA/G-5: Guidance for Quality Assurance Project Plans](#).
- [EPA's Quality Program](#) website has a [list of QA managers](#), and [Non-EPA Organizations Quality Specifications](#).
- The Office of Grants and Debarment [Implementation of Quality Assurance Requirements for Organizations Receiving EPA Financial Assistance](#).

3. Competency of Organizations Generating Environmental Measurement Data: In

accordance with Agency Policy Directive Number FEM-2012-02, *Policy to Assure the Competency of Organizations Generating Environmental Measurement Data under Agency-Funded Assistance Agreements*, the CAR agrees, by entering into this agreement, that it has demonstrated competency prior to award, or alternatively,

where a pre-award demonstration of competency is not practicable, the CAR agrees to demonstrate competency prior to carrying out any activities under the award involving the generation or use of environmental data. The CAR shall maintain competency for the duration of the project period of this agreement and this will be documented during the annual reporting process. A copy of the Policy is available online at <https://www.epa.gov/measurements-modeling/documents-about-measurement-competency-under-assistance-agreements> or a copy may also be requested by contacting the EPA Project Officer for this award.

C. Public Involvement and Community Outreach

1. All cleanup activities require a site-specific Community Involvement Plan. The plan must include providing reasonable notice to the community and opportunity for public involvement and comment on the proposed cleanup options under consideration for the site. All information, including responses to public comments and administrative records, may be made available to the public to the extent consistent with 2 CFR § 200.338 and applicable state, tribal, or local law.

D. Public Awareness

1. The CAR agrees to clearly reference EPA investments in the project during all phases of community outreach outlined in the EPA-approved workplan, which may include the development of any post-project summary or success materials that highlight achievements to which this project contributed.
 - a. If any documents, fact sheets, and/or web materials are developed as part of this cooperative agreement, then they shall comply with the *Acknowledgement Requirements for Non-ORD Assistance Agreements* in the General Terms and Conditions of this agreement.
 - b. If the EPA logo is displayed along with logos from other participating entities on websites, outreach materials, or reports, it must **not** be prominently displayed to imply that any of the recipient or subrecipient's activities are being conducted by the EPA. Instead, the EPA logo should be accompanied with a statement indicating that the Town of Jaffrey received financial support from the EPA under an Assistance Agreement per the term and condition described in Section V.D.1.a. above. More information is available at <https://www.epa.gov/stylebook/using-epa-seal-and-logo>.
 - c. Investing in America Emblem: The recipient will ensure that a sign is placed at construction sites supported in whole or in part by this award displaying the official Investing in America emblem and must identify the project as a “project funded by President Biden's Bipartisan Infrastructure Law.” The sign must be placed at construction sites in an easily visible location that can be directly linked to the work taking place and must be maintained in good condition throughout the construction period.

The recipient will ensure compliance with the guidelines and design specifications provided by EPA for using the official Investing in America emblem available at <https://www.epa.gov/invest/investing-america-signage>.

d. Procuring Signs: Consistent with section 6002 of RCRA, 42 U.S.C. 6962, and 2 CFR 200.323, recipients are encouraged to use recycled or recovered materials when procuring signs. Signage costs are considered an allowable cost under this assistance agreement provided that the costs associated with signage are reasonable.

Additionally, to increase public awareness of projects serving communities where English is not the predominant language, recipients are encouraged to translate the language on signs (excluding the official Investing in America emblem or EPA logo or seal) into the appropriate non-English language(s). The costs of such translation are allowable, provided the costs are reasonable.

2. The CAR agrees to notify the EPA Project Officer listed in this award document of public or media events publicizing the accomplishment of significant events related to construction and/or site reuse projects as a result of this agreement, and provide the opportunity for attendance and participation by federal representatives with at least ten (10) working days' notice.

3. To increase public awareness of projects serving communities where English is not the predominant language, CARs are encouraged to include in their outreach strategies communication in non-English languages. Translation costs for this purpose are allowable, provided the costs are reasonable.

4. All public awareness activities conducted with EPA funding are subject to the provisions in the General Terms and Conditions on compliance with section 504 of the Americans with Disabilities Act.

E. Administrative Record

1. The CAR shall establish an Administrative Record that contains the documents that form the basis for the selection of a cleanup plan. Documents in the Administrative Record shall include the ABCA; site investigation reports; the cleanup plan (or the contractor solicitation if it includes the cleanup plan); cleanup standards used; responses to public comments; and verification that shows that cleanup is complete. The CAR shall keep the Administrative Record available at a location convenient to the public and make it available for inspection. The Administrative Record must be retained for three (3) years after the termination of the cooperative agreement subject to any requirements for maintaining records of site cleanups ongoing at the time of termination.

F. Implementation of Cleanup Activities

1. The CAR shall ensure the adequacy of each cleanup in protecting human health and the environment as it is implemented.
2. If the CAR is unable or unwilling to complete the cleanup, the CAR shall ensure that the site is secure. The CAR shall notify the appropriate state agency and EPA to ensure an orderly transition should additional activities become necessary.

G. Completion of Cleanup Activities

1. The CAR shall ensure that the successful completion of a cleanup is properly documented. This must be done through a final report or letter from a Qualified Environmental Professional, or other documentation provided by a State or Tribe that shows cleanup is complete (including No Further Action letters, institutional controls, etc.). This documentation must be included as part of the Administrative Record.

H. Inclusion of Additional Terms and Conditions

1. In accordance with 2 CFR § 200.334, the CAR shall maintain records pertaining to the cooperative agreement for a minimum of three (3) years following submission of the final financial report unless one or more of the conditions described in the regulation applies. The CAR shall provide access to records relating to cleanups supported with Cleanup cooperative agreement funds to authorized representatives of the Federal government as required by 2 CFR § 200.337.
2. The CAR has an ongoing obligation to advise EPA if it assessed any penalties resulting from environmental noncompliance at the site(s) subject to this agreement.

VI. PAYMENT AND CLOSEOUT

For the purposes of these Terms and Conditions, the following definitions apply: “payment” is EPA's transfer of

funds to the CAR; “closeout” refers to the process EPA follows to ensure that all administrative actions and work required under the cooperative agreement have been completed.

A. Payment Schedule

1. The CAR may request advance payment from EPA pursuant to 2 CFR § 200.305(b)(1) and the prompt disbursement requirements of the General Terms and Conditions of this agreement.

This requirement does not apply to states which are subject to 2 CFR § 200.305(a)

B. Schedule for Closeout

1. Closeout will be conducted in accordance with 2 CFR § 200.344. EPA will close out the award when it determines that all applicable administrative actions and all required work under the cooperative agreement have been completed.

2. The CAR, within 120 days after the expiration or termination of the cooperative agreement, must submit all financial, performance, and other reports required as a condition of the cooperative agreement.

a. The CAR must submit the following documentation:

i. The Final Cooperative Agreement Performance Report as described in Section III.F. of these Terms and Conditions.

ii. Administrative and Financial Reports as described in the General Terms and Conditions of this agreement.

b. The CAR must ensure that all appropriate data have been entered into ACRES or all hardcopy Property Profile Forms are submitted to the EPA Project Officer.

c. As required by 2 CFR § 200.344, the CAR must immediately refund to EPA any balance of unobligated (unencumbered) advanced cash or accrued program income that is not authorized to be retained for use on other cooperative agreements.

[1] Per EPA's General Term and Condition, the CAR must obtain prior approval from the EPA Grants Management Officer or Award Official for cumulative transfers of funds in excess of 10% of the total budget.

Davis-Bacon Term and Condition for Brownfields

1. Program Applicability

- a. **Program Name:** Brownfields Program
- b. **Statute:** Brownfields Direct Cleanup and Revolving Loan Fund Grants authorized by 42 U.S.C. 9604(k) are subject to Davis-Bacon and Related Acts (DBRA) as provided in 42 U.S.C. 9604(g)
- c. **Activities subject to Davis-Bacon:**
 - i. **Brownfield Sites Contaminated with Hazardous Substances:** All construction, alteration, and repair activity involving the remediation of hazardous substances is subject to DBRA. This includes:

- Excavation of contaminated soil;
- Construction of caps, barriers, and structures which permanently house treatment equipment;
- Installation of water supply wells/piping/connections;
- Abatement of contamination in buildings; and
- Demolition (if followed by new construction).

1.

- ii. **Brownfield Sites Contaminated with Petroleum:** DBRA prevailing wage requirements apply when the project includes:

- Excavation of contaminated soil and/or tank removal if followed by paving and concrete replacement, or if it is an extensive soil excavation project;
- Construction of caps, barriers, and structures which permanently house treatment equipment; and
- Installation of water supply wells/piping/connections and related excavation and replacement of contaminated soil.

- d. **Prevailing Wage Classification (e.g., Heavy Construction, Residential, Commercial) (optional):**

- **Heavy Construction:** EPA has determined the “Heavy Construction” classification should be used when soliciting competitive contracts or issuing ordering instruments to existing contractors for:
 - Excavation and removal of contaminated soil;
 - Construction of caps or barriers;

- Replacement of paving and concrete; and
- Installation of water supply wells/piping/connections.
- **Building Construction:** EPA has determined the “Building Construction” classification should be used when soliciting competitive contracts or issuing ordering instruments for the construction of:
 - Demolition (if followed by new construction);
 - Construction of structures which permanently house treatment equipment; and
 - Abatement of contamination in buildings (other than residential structures less than 4 stories in height).
- **Residential Construction:** EPA has determined the “Residential Construction” classification should be used when soliciting competitive contracts or issuing ordering instruments for the abatement of contamination in residential structures less than 4 stories in height.

2. **Davis-Bacon and Related Acts**

[DBRA](#) is a collection of labor standards provisions administered by the Department of Labor, that are applicable to grants involving construction. These labor standards include the:

- Davis-Bacon Act, which requires payment of prevailing wage rates for laborers and mechanics on construction contracts of \$2,000 or more
- Copeland “Anti-Kickback” Act, which prohibits a contractor or subcontractor from inducing an employee into giving up any part of the compensation to which he or she is entitled; and
- Contract Work Hours and Safety Standards Act, which requires overtime wages to be paid for over 40 hours of work per week, under contracts in excess of \$100,000.

3. **Recipient Responsibilities When Entering Into and Managing Contracts:**

c. **Solicitation and Contract Requirements:**

- iii. **Include the Correct Wage Determinations in Bid Solicitations and Contracts:** Recipients are responsible for complying with the procedures provided in [29 CFR 1.6](#) when soliciting bids and awarding contracts.
- iv. **Include DBRA Requirements in All Contracts:** Include the following text on all contracts under this grant:

“By accepting this contract, the contractor acknowledges and agrees to the terms provided in the [DBRA Requirements for Contractors and Subcontractors Under EPA Grants.](#)”

1.

b. **After Award of Contract:**

- ii. **Approve and Submit Requests for Additional Wages Rates:** Work with contractors to request additional wage rates if required for contracts under this grant, as provided in [29 CFR 5.5\(a\)\(1\)\(iii\)](#).
- iii. **Provide Oversight of Contractors to Ensure Compliance with DBRA Provisions:** Ensure contractor compliance with the terms of the contract, as required by [29 CFR 5.6](#).

4. **Recipient Responsibilities When Establishing and Managing Additional Subawards:**

- d. **Include DBRA Requirements in All Subawards (including Loans):**

Include the following text on all subawards under this grant:

“By accepting this award, the EPA subrecipient acknowledges and agrees to the terms and conditions provided in the [DBRA Requirements for EPA Subrecipients](#).”

- 1.
 - b. **Provide Oversight to Ensure Compliance with DBRA Provisions:** Recipients are responsible for oversight of subrecipients, and must ensure subrecipients comply with the requirements in [29 CFR 5.6](#).
5. The contract clauses set forth in this Term & Condition, along with the correct wage determinations, will be considered to be a part of every prime contract covered by Davis-Bacon and Related Acts (see [29 CFR 5.1](#)), and will be effective by operation of law, whether or not they are included or incorporated by reference into such contract, unless the Department of Labor grants a variance, tolerance, or exemption. Where the clauses and applicable wage determinations are effective by operation of law under this paragraph, the prime contractor must be compensated for any resulting increase in wages in accordance with applicable law.

Weston & Sampson Engineers, Inc.
BID
January 15, 2025

Town of Jaffrey
Abatement and Demolition of Former W.W. Cross Property
IFB #2025-1

Appendix C – Federal Wage Determinations

"General Decision Number: NH20250020 01/03/2025

Superseded General Decision Number: NH20240020

State: New Hampshire

Construction Type: Building

Counties: Cheshire and Sullivan Counties in New Hampshire.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

<p>If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:</p>	<ul style="list-style-type: none"> . Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.
<p>If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:</p>	<ul style="list-style-type: none"> . Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number Publication Date
 0 01/03/2025

ASBE0006-014 09/01/2024

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR.....	\$ 44.36	36.63

ELEC0490-005 06/01/2024

	Rates	Fringes
ELECTRICIAN.....	\$ 35.34	22.49

IRON0007-040 09/16/2024

	Rates	Fringes
IRONWORKER, STRUCTURAL.....	\$ 31.95	25.00

LAB00668-001 12/01/2023

	Rates	Fringes
LABORER: Common or General.....	\$ 25.40	21.43

PLUM0131-003 06/01/2024

	Rates	Fringes
PIPEFITTER.....	\$ 43.76	25.44

SUNH2015-006 06/16/2017

	Rates	Fringes
CARPENTER, Includes Drywall Hanging.....	\$ 21.46	4.22
CEMENT MASON/CONCRETE FINISHER...	\$ 23.55	7.14
IRONWORKER, REINFORCING.....	\$ 29.89	10.70
LABORER: Mason Tender - Brick...	\$ 19.60	2.73
LABORER: Mason Tender - Cement/Concrete.....	\$ 20.85	2.61
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 21.52	3.17
PAINTER (Brush and Roller).....	\$ 20.62	0.00
PLUMBER.....	\$ 25.77	9.23
ROOFER.....	\$ 18.87	0.00
SHEET METAL WORKER, Includes HVAC Duct Installation.....	\$ 26.56	24.03
TRUCK DRIVER: Dump Truck.....	\$ 17.43 **	3.60

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

 ** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.75) or 13658 (\$13.30). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

 The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates

in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE:

UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The "SU" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The "SA" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

----- WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

- a) a survey underlying a wage determination
- b) an existing published wage determination

- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
 Wage and Hour Division
 U.S. Department of Labor
 200 Constitution Avenue, N.W.
 Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
 Wage and Hour Division
 U.S. Department of Labor
 200 Constitution Avenue, N.W.
 Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
 U.S. Department of Labor
 200 Constitution Avenue, N.W.
 Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
 U.S. Department of Labor
 200 Constitution Avenue, N.W.
 Washington, DC 20210.

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END OF GENERAL DECISION"