Weston & Sampson

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WESTON & SAMPSON ENGINEERS, INC.
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CONTRACT DOCUMENTS

NOVEMBER 2025

SPECIFICATIONS

Town of Warren, New Hampshire

DEMOLITION AND REMOVAL OF
350 AND 354 NH ROUTE 25
WARREN, NEW HAMPSHIRE 03279

SPECIFICATIONS
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ADVERTISEMENT FOR BIDS

Owner Name: Town of Warren		Project Number: 2025-2		
Project Address:	350 and 354 NH Route 25	Warren	NH	03279
	Street # and name	City/Town	State	ZIP

Separate sealed BIDS for the project: *Demolition and Removal of 350 and 354 NH Route 25* will be received by the Town of Warren at the Town Hall, 19 Water Street, Warren, NH, 03279 until 2:00 P.M. local time on January 14, 2026 and then at said office publicly opened and read aloud.

The scope of work includes, but is not limited to, the demolition and removal of the structures and debris at 350 NH Route 25 and 354 NH Route 25 in their entirety, including abatement of hazardous building materials, complete removal of the above-grade structures, breaking up the building foundations, and backfilling the foundations with clean crushed stone to match the natural grade of the surroundings. The scope of work is further described in 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:
   By June 5, 2026 for substantial completion.
   By June 19, 2026 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 10% 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 December 15, 2025 at 10:00 AM at the project site located at 350 NH Route 25, Warren, New Hampshire 03279. 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 January 5, 2026 at 5:00 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 must 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 Warren 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 Warren with a Certificate of Insurance that shows toy carry liability insurance of at lease $1,000,000 or more, Additionally, your form is responsible for providing a

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

INFORMATION FOR BIDDERS

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

Address: 19 Water Street, Warren NH 03279

Until 2:00 PM local time on Wednesday, January 14, 2026 and then at said office publicly opened and read aloud.

The schedule is expected to proceed as follows:

Contract Documents available:	December 1, 2025
Pre-Bid Meeting and Site Visit:	December 15, 2025 at 10:00 AM
Deadline for questions:	January 5, 2026 at 5:00 PM
Answers to questions by:	January 7, 2026 at 5:00 PM
Bids due:	January 14, 2026 by 2:00 PM

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

Town Administrator, attention Austin Albro, at 19 Water Street, Warren NH, 03279.

Each sealed envelope containing a BID must be plainly marked on the outside as BID for the *Demolition and Removal of 350 and 354 NH Route 25* 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 Town Administrator's Office, attention Austin Albro, 19 Water Street, Warren NH, 03279.

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 (10%) of the total amount of the BID. As soon as the BID prices have been compared, the OWNER will return the 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 <u>not</u> 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.

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 #202111041 and #202409006. The CONTRACTOR is responsible for the health and safety of its employees.

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:

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 Owner 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 Owner on previous contracts of a similar nature.
H. He shall not have failed to complete previous contracts on time, including approved time extensions.

STATEMENT OF BIDDERS QUALIFICATIONS

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.

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

END OF SECTION

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 Warren, New Hampshire (hereinafter called "OWNER").

In compliance with your Advertisement for Bids, BIDDER hereby proposes to perform all WORK For the project Demolition and Removal of 350 and 354 NH Route 25 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:

By June 5, 2026 for substantial completion.

By June 19, 2026 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?		
☐ Yes	☐ 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.				
☐ Yes	☐ 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?		
☐ Yes	☐ No	Have you ever defaulted on a contract? If so where and why?		
☐ Yes	☐ 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 specifications and shown on the plans for the lump 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 Warren, 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 Warren, New Hampshire a certain BID, attached hereto and herby made a part hereof to enter into a contract in writing, for the Demolition and Removal of 350 and 354 NH Route 25.

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

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 Warren, New Hampshire
(Name of Owner)

19 Water Street, Warren, NH 03279
(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:

Demolition and Removal of 350 and 354 NH Route 25

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 25 .

ATTEST:

_____
Principal

By: _____
(Principal) Secretary

(SEAL) **BY** _____

_____
(Address)

By: _____
Witness as to Principal

_____
(Address)

_____
(Surety)

ATTEST: **BY** _____
Attorney - in - Fact

By _____
Witness as to Surety

_____
(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\NH DES\25-XXXX-Warren Demolition\05-Specifications\02-Demo&Abatement\DIV 00\B\B-1 - 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 Warren, New Hampshire
(Name of Owner)

19 Water Street, Warren, NH 03279
(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 25 , a copy of which is hereto attached and made a part hereof for the project:

Demolition and Removal of 350 and 354 NH Route 25

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 25 .

ATTEST:

_____
Principal

By: _____
(Principal) Secretary

(SEAL) **BY** _____

_____
(Address)

By: _____
Witness as to Principal

_____
(Address)

_____
(Surety)

ATTEST: **BY** _____
Attorney - in - Fact

By _____
Witness as to Surety

_____
(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

CHANGE ORDER

No. _____

PROJECT:	Demolition and Removal of 350 and 354 NH Route 25	DATE OF ISSUANCE:	
OWNER:	Town of Warren, NH	OWNER's Project No.	
OWNER ADDRESS:	19 Water St., Warren, NH 03279		
CONTRACTOR:		ENGINEER:	Weston & Sampson Engineers, Inc
CONTRACT FOR:	Demolition and Removal of 350 and 354 NH Route 25	ENGINEER ADDRESS:	100 International Dr., #152, Portsmouth, NH 03801
		ENGINEER's Project No.	ENG25-0999

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:	APPROVED:	APPROVED:
By: _____	By: _____	By: _____
Engineer	Owner	Contractor
_____	_____	_____
Date	Date	Date

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 coordinated with NHDOT through the Right of Way Activities permit.

3.03 MAINTENANCE OF TRAFFIC:

A. A portion of the work occurs within the New Hampshire Department of Transportation (NHDOT) Right-of-Way for Route 25. Contractor shall coordinate all work with NHDOT and apply for applicable permits listed in Section 01 31 43 – PERMITS. Contractor shall not be allowed to load trucks on Route 25 unless express approval is granted by NHDOT.

B. Trucks importing or shipping materials to/from the Site shall prioritize use of state/federal roads and highways over local roads as much as possible.

C. Unless permission to close a portion of the street is received in writing from NHDOT, all materials and equipment shall be placed so that vehicle and pedestrian traffic may be safely always maintained.

D. Should the Chief of Police and/or NHDOT deem it necessary, uniformed officers will be assigned to direct traffic. The Contractor shall make all arrangements in obtaining uniformed officers required.

E. The Contractor shall at its own expense, as directed by the Police Department or NHDOT, 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.

F. 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.

G. 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.

H. 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, curbings, 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 Warren 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.

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 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 includes abatement, demolition, and removal of the structures and debris located on the properties located at 350 NH Route 25 and 354 NH Route 25, Warren, New Hampshire. Structures to be removed include an approximately 1,630 square-foot residential building and 475 square-foot storage building/shed on 350 NH Route 25, and an approximately 2,200 square-foot mixed use building on 354 NH Route 25. These structures shall be removed in their entirety, including complete removal of above-grade features and breaking up the stone foundations as necessary to allow drainage. Work also involves:

- Abatement and disposal of asbestos-containing material (ACM) and lead coated surfaces.
- Securing permits for demolition, abatement, and working within the NHDOT Right-of-Way and paying any fees required with respect to those permits.
- Removal and disposal of all debris from the Site, including former building contents and miscellaneous solid waste at the Site.
- Removal and disposal of the former 275-gallon residential fuel tanks located in the basement of the building at 354 NH Route 25.
- Disconnection and capping of existing utilities services to the buildings.
- Backfilling the foundations with crushed stone to match natural grade of the surroundings.

See Contract Drawings for additional details.

1.02 EXISTING CONDITIONS:

The Contractor shall note the project involves the handling of hazardous building materials impacted with asbestos and lead. Asbestos-containing materials (ACM) identified on-site include, but are not limited to, caulking and glazing in windows, as well as siding materials within the buildings located at 350 and 354 NH Route 25. Lead-based paint (LBP) was identified on numerous painted surfaces throughout each building. Polychlorinated biphenyl (PCB) containing window glazing was detected at 354 NH Route 25. The PCB containing material is an excluded PCB product waste that is not regulated by the Environmental Protection Agency (EPA), 40 CFR 761.

Refer to the following for additional information:

- Section 02 82 33 – ASBESTOS ABATEMENT
- Section 02 80 00.13 – REMOVAL OF UNIVERSAL HAZARDOUS WASTE FROM BUILDINGS.
- Section 02 83 19 – LEAD-BASED COATINGS REMOVAL
- Appendix A – Hazardous Building Material Investigation Reports.

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 and implement erosion and sedimentation controls.
b. Verify the location of all site utilities using a private utility locator and/or utility companies. Disconnect all utilities serving the buildings in compliance with utility authority requirements prior to commencing any demolition or excavation work. Identify catch basins and underground drainage lines to remain and install protective measures as needed.
c. Obtain all required demolition and NHDOT permits. Prepare and submit project-specific plans and submittals, including demolition plan, health and safety plan, dust control plan, and any other documents required by regulatory agencies or the Contract Documents.
d. Remove all asbestos and other hazardous materials prior to building demolition, in accordance with applicable regulations and the Contract Documents.
e. Demolish and remove all above-grade components of the primary buildings and storage building, including ancillary structures and features, as specified.
f. Collect and remove miscellaneous solid waste within the limits of work and dispose of solid waste.
g. Break up existing stone foundations to allow adequate drainage.

h. Backfill all excavation areas resulting from foundation and slab removal. Use clean, non-contaminated gravel and grade to match the surrounding natural terrain.
i. Complete plantings of specified trees at the locations shown.
j. Remove all temporary erosion and sedimentation controls and chain-link fencing upon completion of work and site stabilization.

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. Provide and maintain a temporary water supply for construction purposes, including dust control, demolition, equipment cleaning, and other site activities. No hydrant is available on site for Contractor's use. Contractor shall provide a water truck and coordinate usage of water for construction purposes.

B. 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 overhead and 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. Where necessary, the Contractor shall excavate test pits for the purpose of locating underground pipelines or structures in advance of demolition work. Contractor shall test pit up

to 100 cubic yards of soil for the purpose of locating underground pipelines and structures. 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. Test pit excavation for the purpose of locating underground pipelines and structures will be at no additional cost to the Owner.

3.05 COORDINATION OF WORK:

A. 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:

A. 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:

A. 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:

A. 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.

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 visible dust clouds are present, 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 providing temporary water for dust control purposes. Furnish all labor, materials, equipment, and incidentals required for dust control during the demolition and abatement activities.

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 visible particulate matter emissions (dust clouds).

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 ten 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 daily, 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 instances of visible dust clouds will require the Contractor to notify the Owner and Engineer stop work. The Contractor shall apply additional dust controls until the cloud is addressed and documented reduction of dust levels. No additional compensation will be made for delays due to stoppages to addressed elevated dust levels.

1.05 DUST MONITORING:

A. 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 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.

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. Contractor shall be responsible for providing all water for construction purposes. No hydrant is available at the Site. Contractor shall supply water trucks and coordainte the supply of water at no additional cost to the owner.

   B. 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. 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. 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. Haul truck cargo areas shall be securely and completely covered during material transport on public roadways.

C. 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.

D. The Contractor shall not be allowed to utilize the public roadway for loading trucks. 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 – DEMOLITION AND REMOVAL OF 350 AND 354 NH ROUTE 25

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

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.

1.02 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 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: submittal preparation, site mobilization, site work, environmental protection, utility abandonment, abatement and demolition activities, site restoration, project closeout, and demobilization.

C. The schedule shall be updated by the Contractor on a weekly basis and submitted to the Engineer and Owner for review.

1.03 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. Divisions 1 – 31 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. Transmit the electronic shop drawings and product data to the following: Botticello.Peter@wseinc.com

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. Submittal Preparation - Contractor may use any or all of the following options:

a. Subcontractors and Suppliers provide electronic (PDF) submittals to Contractor via a 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.

2. 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.

3. Contractor shall email each submittal to the Engineer and Owner.

4. Engineer will review and make comments on each submittal. The Contractor will receive email notice of completed reviews.

5. 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 by email.

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 and glazing found in and around windows, roofing materials, and tiling. Lead-based paint (LBP) was identified on numerous painted surfaces, and an excluded PCB Product Waste was observed in window glazing at 354 NH Route 25. Results of hazardous building material investigations are provided with Appendix A.

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 <u>minimum</u> 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.

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.

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 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.

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 31 43 – PERMITS

D. Section 01 57 19 – ENVIRONMENTAL PROTECTION

E. 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 or the New Hampshire Department of Transportation, 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.

3.02 PERMITS

A. The Contractor shall apply, pay for, and obtain a “Right-of-Way Activities” permit from the New Hampshire Department of Transportation in accordance with Section 01 31 43 – PERMITS.

B. Contractor shall not utilize NH-25 for loading of demolition debris, equipment staging, or impede on the right of way in any manner without express permission with NHDOT. Contractor shall apply for a Right of Way Activities permit with NHDOT to request partial closure of NH-25 to load demolition debris. Contractor shall comply with all requirements of NHDOT and provide applicable signage and traffic control as necessary at no additional cost to the Owner.

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.

B. The Contractor shall be responsible for securing the site from trespassers.

1.02 SUBMITTALS:

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. Posts

1. Maximum post spacing shall be 10-feet. Post spacing shall be uniform and posts shall be plumb.

2. Drive posts, set in holes and backfill, or anchor in precast concrete blocks.

3. For soft and unstable ground conditions, cast concrete plug around post.

4. Posts over pavement: Use steel post plates or precast concrete blocks.

5.

6. Gate posts: Use bracing or concrete footings to provide rigidity for accommodating size of gate.

7. 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. Remove temporary fencing upon completion of Work or when no longer required for security or control. Backfill holes and compact. Holes in pavement shall be surfaced to match existing surface. Repair damage caused by installation of temporary fencing.

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

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 Resistance2, %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	$^{0.05}$ ec^{-1}

2.02 STRAW BALES AND ORANGE FENCE

A. Straw bales shall consist of certified seed free stems of agricultural grain and cereal crops and shall be free of grasses and legumes. Standard bales shall be 14-inches high, 18- inches wide and 36- to 40-inches long tied with polypropylene twine and weigh within 5 percent of 7 lbs. per cubic ft.

B. In accordance with the requirements of the New Hampshire Department of Environmental Services Shoreland Permit that has been filed for this project, the Contractor shall install orange snow fence adjacent to the proposed straw bales between the Site and the Baker river.

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 BALED HAY:

A. To trap sediment and to prevent sediment from clogging drainage systems, baled hay shall be used where shown on the drawings. Care shall be taken to keep the bales from breaking apart. The bales should be securely staked to prevent overturning, flotation, or displacement. All deposited sediment shall be removed periodically. Hay bales shall not be placed within a waterway during construction of the pipeline crossing.

B. The Contractor shall remove all baled hay after construction is completed.

3.10 NOISE CONTROL:

A. 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.

B. When available, make the maximum use of "low noise emission products" as certified by EPA. No blasting or use of explosives is permitted.

C. Protect employees against noise exposure in accordance with the requirements of the Occupational Safety and Health Act of 1972.

D. Compliance with the requirements of this Section will not offer any relief from responsibility for compliance with local ordinances, regulations, and other Sections.

E. Compliance with the requirements of this Section will require the use of machines with effective mufflers or enclosures and the 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.

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 Item Warranty Duration		

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.

B. The locations of some existing underground and overhead utility services are shown on the Contract Drawings. Locations are based on available records and site reconnaissance. 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 is responsible for disconnecting all utilities connected to the buildings whether shown on the plans or not. 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. Where necessary to complete the work, excavate test pits to locate underground pipelines or structures in advance of demolition work. Backfill test pits immediately after their purpose has been satisfied and restore and maintain disturbed surfaces in a satisfactory manner. Perform test pitting at no additional cost to the Owner.

D. Except where specifically noted otherwise, the Contractor shall protect the existing stormwater culvert indicated on the Contract Documents, active water services, active sewer utilities, and remaining utilities not designated for removal.

E. The Contractor shall furnish all materials, tools, labor, and equipment to abandon, cut/cap/plug, terminate, and discontinue existing utilities as specified herein.

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. 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. Electrical Service:

1. The disconnection of electrical utilities/any overhead wires to be done by others. Scheduling of disconnection will require coordination between the Contractor, Electric Company/Others and the Owner.

2. The Contractor will arrange to have the electrical services terminated at utility poles as shown on the Contract Drawings. The Contractor shall remove and dispose of all wire and electrical appurtenances that are abandoned. The Contractor shall <u>not</u> remove any transformers or any active utility poles. The Contractor shall <u>not</u> remove any utility poles once made inactive. The Contractor shall coordinate with the Owner and Electric Company before handling any utility poles, electrical wiring, and appurtenances.

B Telephone:

1. The Contractor shall arrange with the telephone provider to have telephone services to the building disconnected at the pole. The Contractor shall remove and dispose of all abandoned wiring and appurtenances. The Contractor shall <u>not</u> remove any utility poles once made inactive. The Contractor shall coordinate with the Owner before arranging to have telephone service disconnected.

D. Sewer Services:

1. There is no public sewer in Warren. The Contractor shall locate the septic connections at each building and abandon each system in accordance with all federal, state, and local regulations.

END OF SECTION

SECTION 02 41 16
DEMOLITION

PART 1 - GENERAL

1.01 DESCRIPTION:

A. This Section specifies the demolition of the existing structures located at 350 NH Route 25 and 354 NH Route 25 in Warren, New Hampshire. This demolition work is located within the Contract Limits of Work as shown on the Contract Drawings. The extent of building demolition includes the complete removal and proper disposal of the above ground structures, below grade foundations, and ancillary site features such as the accessory wood storage shed in its entirety, unless otherwise specified. 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 building at 350 NH Route 25 consists of a multi-story residential building. The building at 354 NH Route 25 consists of a multi-story mixed use building. Both buildings are abutted by a paved right-of-way (NH Route 25) to the west. The Baker River directly abuts each property to the east. Properties to the north and south are undeveloped.

2. The main above-grade features include the residential and mixed-use buildings, a small (approximately 475 square foot) wooden storage shed on the 350 NH Route 25 property, and the paved driveways that are accessed from NH Route 25.

3. 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.

4. 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. See specification Section 02 41 13.36 – Utility Abandonment for additional details.

5. The Contractor shall protect adjacent properties from damage and undermining during demolition activities by means and methods acceptable to the Owner and Engineer.

6. 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. Stone foundations shall be broken up and buried within the building footprint. All materials, shall be removed, reused and/or transported to appropriate recycling or disposal facilities.

7. The Contractor shall remove and dispose of the two 275-gallon aboveground storage tanks (AST) at the 354 NH Route 25 building. The Contractor shall be responsible for obtaining

all applicable permits, applications, and notifications related to the work specified herein. Assume there is 100 gallons of #2 home heating oil remaining in each tank that will require disposal in accordance with all local, state, and federal regulations.

C. Demolition Outside the Building Footprint

1. The Contractor shall limit the clearing of shrubs and trees only to extent required to complete the work of this Contract and as shown on the Contract drawings. Coordinate removal of trees and shrubs with the Engineer and Owner. Protect all trees not scheduled for removal 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. The Contractor shall visually inspect the site outside of the building's footprints for verification and completeness of site appurtenances, improvements, debris, and 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.

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 BUILDINGS

The following is a general description of the primary buildings 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. The information below is typically encountered and provided for the convenience of the Contractor only. Building construction and dimensions vary and the Contractor shall field verify building construction and dimensions. Aboveground structures and ancillary site features such as the wood storage shed enclosure shall also be demolished. See Contract Drawings for additional details.

350 NH Route 25

Footprint:	Approximately 1,630 square foot building footprint
Description:	The building is a two-story floor, single family residential building. Property also contains an approximately 475 square foot wood framed accessory/storage that has a single-slope shed roof with metal roofing panels.
Foundation:	Stone and wood
Building Framing:	Wood framing
Flooring:	Wood slat, carpet, vinyl, and dirt/concrete (basement)
Interior Walls:	Wood framed walls with plaster/gypsum wallboard or paneling
Exterior Walls:	Wood framed with vinyl siding
Roof:	Intersecting gable roof with metal roofing material

354 NH Route 25

Footprint:	Approximately 2,200 square foot building footprint
Description:	Referred to as the Old Jameson Store. The building is a two-story, former mixed-use commercial and residential building.
Foundation:	Stone and wood
Building Framing:	Wood framing
Flooring:	Wood slat, vinyl, carpet, and unfished concrete (basement)
Interior Walls:	Wood framed walls with plaster/gypsum wallboard
Exterior Walls:	Wood framed walls with wood clapboard, vinyl siding, or asphaltic sheeting (faux brick)
Roof:	Flat rubber membrane roof

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 57 19 – ENVIRONMENTAL PROTECTION

F. Section 02 41 13.36 – UTILITY ABANDONMENT

G. 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.

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 14 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. 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.

C. The Contractor shall maintain a 6-foot chain link fence 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, particularly NH-25 and the Baker River.

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. Perform demolition according to the requirements of the NHDES Shoreland Permit that will be provided as an addendum to these specifications. Except where required to remove existing debris located at the site, all demolition activities shall be confined to areas of land located above the ordinary high-water level shown on the Contract Drawings.

C. Remove and properly dispose off-site of all above-ground building structures unless otherwise specified.

D. Any debris that falls into the Baker River shall immediately be removed at no additional cost to the owner.

E. Properly remove and dispose of all oil and hazardous 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.

F. Demolish and remove all below-grade foundation components, including stone and masonry materials. Stone and uncoated masonry foundation elements may be broken into pieces and left in place. Excess foundation elements that can be left in place shall be removed and properly disposed of off-site by the Contractor. The off-site transportation and disposal of foundation elements shall be at not additional cost to the Owner.

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 TANKS

A. Contractor shall pump residual contents of the residential fuel storage tanks into appropriate containers for off-site disposal or recycling. Remove all fluids and sludges, leaving the tanks ready for cleaning. Assume up to 200 total gallons of residual fuel / sludge remains in the ASTs. 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 Warren 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. Clean the AST, associated aboveground piping, and appurtenances for shipment as a non-hazardous waste. Wash water contaminated with petroleum shall be collected for appropriate 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.

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, New Hampshire, and appropriate Town of Warren 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
350 NH Route 25 Property	
Paint Can (1/2 gallon)	50
Household Cleaning Supplies (32 oz)	50
Fuel Canister (gasoline, kerosene; 1 gallon)	5
Propane Tank (5 gallon)	3
Home propane tank (120 gallons)	1
4-inch Fluorescent Bulbs	10
Compressed Canister (16 oz)	50
Fire Extinguisher	5
Tires	15
E-Scrap/Car Parts	Numerous
354 NH Route 25 Property	
Fluorescent light bulbs	10
Fluorescent light ballasts	10
Water heater	1
Portable air conditioning unit	1
Television	3
Motor oil (1 gallon)	1
Aboveground storage tanks (275-gallon)	2
Hydraulic fluid (5 gallon)	1
Portable heater	1
Abandoned pails	2
Abandoned 55-gallon drums	2

See attached hazardous building investigation reports (Appendix A).

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. The following ACMs were identified within the Site buildings: window glazing compound, window caulking, and exterior siding.

H. For the purpose of this Section, the following definitions apply:

"Site" shall refer to the buildings at 350 and 354, NH-25 in Warren, 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 Warren.

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 materials: window glazing compound, floor tile and mastics (multiple types), , roofing materials, other specified assumed 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 residential and mixed-use buildings at 350 and 354 NH Route 25 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.

Material	Location	Approximate Quantity
350 NH Route 25 Property		
Grey Caulk Under Window	Exterior	250 LF
White Siding	Exterior	5,500SF
Red Window Glazing	Exterior	250 SF
Black Window Glazing	Exterior	250 SF
354 NH Route 25 Property		
Window Glazing, White	Exterior	36 LF
Roof Materials, Black (2)	Exterior, Residence area and east addition	1,200 SF
12" X 12" Floor tile and associated mastic (2)	East addition, first floor	400 SF
Vinyl plank flooring, wood pattern and associated mastic (2)	Residence, first floor, living room, kitchen	200 SF
Sheet flooring, white with 4" square pattern, and associated mastic (2)	Residence, first floor, bathroom	50 SF
Gypsum wallboard with tape and joint compound, white (2)	First and second floors, throughout	3,000 SF
Boiler gaskets, tan-gray (2)	Basement, boiler room	10 SF
Electric wire insulation wrap, black, white (2)	Basement, first and second floors	600 SF

1. Asbestos-containing mastic may be adhered to carpet, tile, flooring, etc. such materials should be considered contaminated by asbestos and handled, removed and disposed of as ACM.
2. Assumed ACM based on *Asbestos and Hazardous Building Materials Survey* performed by GZA GeoEnvironmental, Inc. (April 2022).

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 Warren 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 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 painted surfaces contain lead. 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

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 ($\mu g/m^3$) 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 $\mu g/m^3$ 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 lead painted 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 350 and 354 NH Route 25 for lead. The lead testing results are attached to these specifications.

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 $\mu g/m^3$. 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 <u>required</u> 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 ($\mu g/m^3$).

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 $\mu g/m^3$. 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 and building foundations, 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 and basements to match natural grades of the surrounding area unless otherwise required by the Owner and Engineer. No excavated material will be removed from the site as part of this contract. Notify the Owner and Engineer prior to the import of material for use as backfill.

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

F. 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/ft3) (2700 kN-m/m3).
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).

ASTM D6913 Standard Test Method Particle Size Analysis of Soils

1.04 PROTECTION OF EXISTING PROPERTY:

A. Protect existing improvements scheduled to remain 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 the 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 towards the Baker River. 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 materials for test pitting and utility cut/capping activities shall be placed back into the excavation and compacted as specified herein. Reuse excavated material on-site in the area from which the material was excavated.

B. CRUSHED STONE (COARSE):

a. Material shall consist of inert material that is hard, durable stone and coarse sand, free from loam and clay, surface coatings and deleterious materials.

b. Material properties and gradation shall comply with New Hampshire Department of Transportation (NH DOT) Standard Specifications, Section 304 – Aggregate Base Course: Crushed Stone (Coarse), 304.5.

C. LANDSCAPE FABRIC

a. Landscape Fabric shall have a grab tensile strength of at least 90 lbs and a flow rate of at least 135 gal/min/ft^2. Landscape fabric shall be Mirafi MSCAPE or approved equal

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.

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 necessary to complete demolition and utility abandonment. 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 Warren or NHDOT.

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.

3.03 BACKFILL PLACEMENT & COMPACTION:

A. GENERAL:

1. Prior to backfilling, the Contractor shall compact the exposed natural subgrade to the densities as specified herein.

2. The Contractor shall place landscape fabric on the subgrade across all locations to be backfilled. Backfill the former building foundations using crushed stone (coarse) and other excavations related to demolition activities to match surrounding natural grade.

3. The Contractor shall place and compact materials in continuous horizontal layers, not to exceed nine (9) inches in uncompacted lifts. The minimum degree compaction shall be 95% as determined by AASHTO T 99 (Standard Proctor Test).

4. The Engineer reserves the right to test backfill for conformance to the specifications and Contractor shall assist as required to obtain the information.

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 32 93 00

TREES, SHRUBS, GROUNDCOVERS, AND LANDSCAPING

PART 1 - GENERAL

1.01 WORK INCLUDED:

A. This Section includes furnishing all labor, materials, equipment, plants, and incidental materials necessary to perform all operations related to the planting of all trees and for all appurtenant work, complete in place, maintained, and accepted, in accordance with the Contract Drawings and Specifications.

B. The Contractor shall bear the responsibility and cost of furnishing and applying water or any other substances, as necessary to ensure the sustainability of plant materials, as part of the work of this contract.

1.02 SUBMITTALS:

In accordance with requirements of Section 01 33 23 SUBMITTALS, the Contractor shall submit the following:

A. Prior to planting, State nursery inspection certificates for all plant materials.

PART 2 - PRODUCTS

2.01 PLANT MATERIALS:

A. The Contractor shall furnish and plant all plant materials as shown on the plans and in the quantities and sizes listed thereon. No substitutions shall be permitted without the written approval of the Engineer.

B. Plants larger than those specified on Sheets C-103 and D-101 may be used if approved by the Engineer. However, use of such oversized plants shall not be considered grounds for any increase in the contract price. If the use of larger plants is approved, the required spread of roots or ball of earth shall be increased in proportion to the size of the plant and plant pits shall be increased as necessary.

C. All plants shall be certified to have passed all required Federal and State inspection laws requiring ensuring freedom from plant diseases and insect infestations. The Contractor shall obtain clearance from applicable governing agencies, as required by law, before planting any plants delivered from outside the state in which they are to be planted.

D. All plants shall be nursery-grown under climatic conditions and environmental stresses similar to those in the locality of the project. All plants shall originate from nurseries that are no more than one Hardiness Zone higher (as established by the Arnold Arboretum, Jamaica Plain, MA) than where the plant is to be installed. Plants also shall conform to the botanical names and standards of size, culture, and quality for the highest grades and standards as adopted by the AmericanHort in the American Nursery Stock Standard, Z60.1, latest edition. All plants shall be legibly tagged with their proper botanical name.

E. No heeled-in plants or plants from cold storage shall be used. All plants shall be typical of their species or variety and shall have a normal habit of growth. Plants shall be sound, healthy, and vigorous, well branched and densely foliated when in leaf; shall be free of disease, insects, eggs or larvae; and shall have healthy, well-developed root systems. All parts of the plant shall be moist and shall show active green cambium when cut.

F. All nursery plants shall be balled and burlapped or container-grown and shall have been acclimatized for at least one growing season. Container-grown stock shall have been grown in a container long enough for the root system to have developed sufficiently to hold its soil together, firm and whole, after removal from the container. No plants shall be loose in the container. Container-grown plants shall have no girdling roots and shall not be in a root-bound condition. Plants shall remain in their container until planted.

G. Care shall be exercised in digging and preparing field-grown plants for shipment and planting. Balled and burlapped materials shall have solid unbroken balls of earth of sufficient size to encompass all fibrous feeding roots necessary to ensure successful recovery and development of the plants. Balls shall be firmly wrapped in untreated biodegradable burlap and tied securely with wire cages and/or jute twine. Roots or balls of plants shall be adequately protected at all times from sun and drying winds. No plant shall be accepted when the ball of earth surrounding its roots has been badly cracked or broken preparatory to or during planting, or after the burlap, staves, wire cage, rope, or platform in connection with its transplanting have been removed. Soil characteristics (i.e., composition, texture, pH, etc.) of all field-grown plants shall closely match those of the soil where plant materials are to be planted.

H. The caliper of the trees shall not be less than the minimum size designated on Sheet C-103 and D-101. The branching height for deciduous trees installed adjacent to or within walks shall be 7 feet minimum, having been pruned to this height at least 1 year prior to transplanting. Except when a clump is designated, the trunk of each tree shall be a single trunk growing from a single, unmutilated crown of roots. No part of the trunk shall be conspicuously crooked as compared with normal trees of the same variety. The trunk shall be free from sunscald, frost cracks, or wounds resulting from abrasions, fire, or other causes. All pruning cuts shall comply with acceptable horticultural practices. No pruning wounds having a diameter of more than 1½-inches shall be present. Any such wounds must show vigorous bark growth on all edges. No tree that has had its leader cut or die shall be accepted.

I. Caliper measurements for tree trunks shall be taken 6-inches above ground for trees up to and including 4-inch caliper size and at 12-inches above ground for larger sizes.

J. Plants shall be delivered only after preparations for planting have been completed. Plants shall be handled and packed in a horticulturally approved manner and all necessary precautions shall be taken to ensure that plants arrive on-site in a healthy vigorous condition. Trucks used for transporting plants shall be equipped with covers to protect plants from windburn, desiccation, and overheating during transport. Plants that have not been thoroughly watered shall not be accepted at the planting site. Any plants delivered to the site in a dry or wilted condition shall be rejected and replaced at no expense to the Owner. All plant materials shall be protected, watered and otherwise maintained prior to, during, and upon delivery to the site.

K. Plants shall be subject to inspection and approval by the Engineer at the place of growth, or upon delivery, for conformity to specification requirements as to quality, size, variety, and condition. Inspection and selection of plants before digging shall be at the option of the Engineer. The Contractor, or its representative, shall be present, if requested by the Engineer, for inspection of plants at the Nursery. Such approval shall not impair the right of inspection and rejection upon delivery at the site or during the progress of work, for size and condition of balls and roots, disease, insects and latent defects or injuries. Rejected plants shall be removed immediately from the site. Certificates of inspection of plant materials shall be furnished as may be required by Federal, State and other authorities to accompany shipments.

2.02 LOAM BORROW:

A. Loam Borrow shall consist of, fertile, friable natural topsoil, typical of productive soils in the vicinity, obtained from naturally well-drained areas that have never been stripped. Loam Borrow shall be

reasonably free of stumps, roots, heavy or stiff clay, stones larger than 1-inch in diameter, lumps, coarse sand, noxious weeds, sticks, brush or other litter.

B. Loam Borrow shall be classified as a sandy loam by the USDA textural classification system as determined by sieve and pipette or hydrometer analysis. Loam Borrow shall have the following mechanical analysis:

Textural Class	Percent of Total Weight	Avg. Percentage
Sand (0.05 – 2.0mm range)	45 – 75	60
Silt (0.002 – 0.05mm range)	15 – 35	25
Clay (less than 0.002mm)	5 – 20	15

C. Loam Borrow shall contain not less than 4 percent or more than 7 percent organic matter as determined by the loss of weight by ignition of oven-dried samples. Test samples shall be oven-dried to a constant weight at a temperature of 230 degrees F.

D. Loam Borrow shall not be excessively acid or alkaline, and shall not contain any phytotoxic materials or unacceptable concentration levels of any substance harmful to plant growth as determined by the soils testing laboratory. Loam Borrow shall have a pH value range between 5.0 and 6.5. Maximum soluble salt index shall be 100. The electrical conductivity (EC2) of a 1:2 soil-water suspension shall be less than or equal to 1.0 millimhos/cm. Aluminum concentration levels shall be less than 200ppm.

E. Loam Borrow shall not be worked, excavated, or delivered in a frozen or muddy condition. Soil structure shall not be destroyed through excessive and unnecessary handling or compaction.

F. Existing on-site topsoil may be re-used as Loam Borrow provided it meets these specifications.

G. All amendments to Loam Borrow shall be approved by the Engineer and shall be made in accordance with recommendations from the soils testing laboratory for use of Loam Borrow as a plant-growing medium and these specifications.

2.03 SOIL ADDITIVES AND AMENDMENTS:

A. LIMESTONE:

Lime shall be an approved agricultural limestone containing at least 50 percent total oxides (calcium oxide and magnesium oxide). The material will be ground such that 50 percent of the material will pass through a No. 100 mesh sieve and 98 percent will pass a No. 2 mesh sieve. Lime shall be uniform in composition, dry and free-flowing and shall be delivered to the site in the original sealed containers, each bearing the manufacturer's guaranteed analysis.

B. FERTILIZER:

1. Fertilizer shall be a complete, standard commercial fertilizer, homogeneous and uniform in composition, dry and free-flowing, and shall be delivered to the site in the manufacturer's original sealed containers, each bearing the manufacturer's guaranteed analysis and marketed in compliance with State and Federal Laws. All fertilizer shall be used in accordance with the manufacturer's recommendations.

2. Fertilizer for tree, shrub and groundcover plantings shall contain all major plant nutrients and minor trace elements essential to sustain plant growth and shall have the following analysis:

Nitrogen (N) Phosphorous (P) Potassium (K)

10%	10%	10%

3. As approved by the Engineer, a slow release root contact fertilizer installed at the time of planting, may be used in place of the above, at the discretion of the Contractor.

C. Organic Compost shall be a standard commercial product comprised of fully decomposed, 100 percent plant-derived, natural organic matter. Its composition shall furnish ample water holding capacity and cation exchange capacity for the retention of plant nutrients. Compost shall be free of sticks, stones, weed seeds, roots, mineral or other foreign matter and delivered air dry. It shall be free from excessive soluble salts, heavy metals, phytotoxic compounds, and/or substances harmful to plant growth and viability. Organic compost shall have an acidity range of 4.5 to 7.0 pH.

D. Sphagnum Peat Moss shall be a standard commercial product. Its composition shall furnish ample water holding capacity and cation exchange capacity for the retention of plant nutrients. Peat moss shall be free of sticks, stones, weeds or weed seeds, roots, mineral or other foreign matter. It shall be free from toxic substances and/or compounds harmful to plant growth and viability. It shall be delivered air dry in standard bales and shall have an acidity range of 3.5 to 5.5 pH.

E. Humus shall be natural humus, reed peat, or sedge peat. Its composition shall furnish ample water holding capacity and cation exchange capacity for the retention of plant nutrients. Humus shall be free of sticks, stones, weeds, roots, mineral or other foreign matter and/or toxic substances harmful to plant growth and viability. It shall be low in wood content, free from hard lumps and excessive amounts of zinc and delivered air dry in a shredded or granular form. The acidity range for humus shall be 5.5 to 7.5 pH, and the organic matter content shall be not less than 85 percent, as determined by loss on ignition. The minimum water holding capacity shall be 200 percent by weight on an oven-dry basis.

F. Manure shall be well-rotted, leached, cow manure not less than 8 months or more than 2 years old. It shall be free of sawdust, shavings, or refuse of any kind and shall not contain more than 25 percent straw. It shall contain no substances harmful to plant growth. The Contractor shall furnish information regarding chemical disinfectants, if any, that may have been used in storage of the manure.

2.04 PLANTING MIXTURE:

Planting mix shall consist of 7 parts loam borrow and 1 part organic compost, humus, sphagnum peat moss, or manure, thoroughly blended.

2.05 WATER:

Water shall be furnished by the Contractor, unless otherwise specified, and shall be suitable for irrigation and free from ingredients harmful to plant growth and viability. The delivery and distribution equipment required for the application of water shall be furnished by the Contractor, at no additional cost to the Owner.

2.06 MULCH:

Mulch shall be fibrous pliable shredded soft bark mulch, not exceeding ½-inch in width. It shall be 98 percent organic matter with a pH range between 3.5 and 4.5 and a moisture content not to exceed 35 percent. It shall be free of weeds, weed seeds, debris, and other materials harmful to plant growth and viability. Organic mulch shall be aged no longer than 2 years.

2.07 MATERIALS FOR STAKING, GUYING, AND WRAPPING:

A. Tree stakes shall be sound, untreated 2 x 3 (nominal) x 8-foot length Douglas Fir reasonably free of knots. No paint or stain shall be used in conjunction with tree stakes. Tying material shall be flexible braided nylon webbing, ¾-inch wide and have a tensile strength of 900 pounds. Webbing shall be Green Tie Webbing by Agriculture Solutions LLC or approved equal.

B. Drive anchors and guy wire assemblies shall be suitable for protecting trees and shall be sized in accordance with the manufacturer's recommendations. No materials shall be used for guying that will girdle, chafe, or otherwise injure trees.

C. Tree wrap shall be duplex, waterproof kraft paper crinkled to 33-1/3 percent stretch, 4 to 6-inch wide strips. Tying materials shall be jute twine, 2-ply for shrubs and trees less than 3-inch caliper; 3-ply for larger plants.

2.08 TREE PAINT:

Tree paint shall not be used.

2.09 ANTI-TRANSPIRANT/ANTI-DESICCANT:

Anti-transpirant or anti-desiccant shall be 'Wilt-Pruf', as manufactured by Wilt-Pruf Products or approved equal. It shall be delivered in original sealed manufacturer's containers and used in accordance with the manufacturer's instructions.

2.10 INSECTICIDES:

A. No insecticides shall be used on-site without the Contractor notifying and obtaining the prior approval of the Engineer.

B. Insecticides shall be EPA registered and approved for use in public open spaces. All insecticides shall be handled by State licensed applicators only, delivered in the original sealed manufacturer's containers, and used in accordance with the manufacturer's instructions.

C. Insecticide use shall be limited and selective, only to control specific insect infestations, as identified by the Contractor or the Owner's Representative that may result in the disfigurement, decline, or death of plant materials.

2.11 HERBICIDES:

A. No herbicides shall be used on-site without the Contractor notifying and obtaining prior approval of the Engineer.

B. Herbicides shall be EPA registered and approved for use in public open spaces. All herbicide shall be handled by State licensed applicators only, delivered in the original sealed manufacturer's containers, and used in accordance with the manufacturer's instructions.

C. Herbicide for post-emergent application shall be Plateau by BASF, Snapshot 25 TG by Cortera Agriscience, or approved equal.

D. Herbicide use shall be limited and selective, only to control specific weed infestations that have been identified by the Contractor or the Owner's Representative.

2.12 FUNGICIDES:

A. No fungicides shall be used on-site without the Contractor notifying and obtaining prior approval

of the Engineer.

B. Fungicides shall be EPA registered and approved for use in public open spaces. All fungicides shall be handled by State licensed applicators only, delivered in the original sealed manufacturer's containers, and used in accordance with the manufacturer's instructions.

C. Fungicide use shall be limited and selective, only to control specific fungal pathogenic disease infestations, as identified by the Contractor or the Owner's Representative, that may result in the disfigurement, decline, or death of plant materials.

PART 3 - EXECUTION

3.01 INSTALLATION:

A. All plants shall be subject to inspection and approval by the Engineer upon delivery to the site. No materials shall be planted until approval is received.

B. All work shall be performed by skilled workers with a minimum of 2 years planting experience, in accordance with accepted horticultural/nursery practices, under the full-time supervision of a Certified Nurseryman or Arborist.

C. All balled and burlapped plants that cannot be planted immediately upon delivery shall be set on the ground and the root balls shall be well protected with soil, wet moss, or other acceptable material. All foliage shall be protected and covered with perforated shade materials.

D. The planting season for evergreen trees and shrubs shall extend from the time the soil becomes workable in the spring until new growth appears, and from September 15 until November 30 in the fall. Deciduous trees and shrubs shall be planted only when dormant, either prior to bud break and/or before leaves appear in the spring, or subsequent to their leaf drop in the fall. Ground covers shall be planted only after the last frost in the spring through mid-May. Planting season periods may be extended if weather and soil conditions permit only with the written approval of the Engineer. Extended or out-of-season planting requirements shall include application of antitranspirant and extra water as needed. Plant guarantee periods shall remain as stated below. Planting shall not be permitted in frozen ground.

E. All plant locations and outlines for planting beds shall be staked out for review and potential adjustment by the Engineer before any excavation is begun. In the event that rock, underground construction work or obstructions are encountered in any proposed planting pit or bed, the Engineer may select alternate locations. Where locations cannot be changed, the obstruction shall be removed, subject to the Engineer's approval, to a depth of not less than 3 feet below grade and not less than 6-inches below the bottom of the root ball when plant is properly set at the required grade. Removal of boulders or obstructions greater than 1 cubic yard in size shall be subject to approval and will be paid for by the Owner. No ledge will be removed to create planting pits or beds

F. All planting pits shall be excavated with sloped walls, wider at the top than at the bottom, and scarified to eliminate glazing. Tree pits shall be at least 2 feet greater in diameter than the root ball of earth or root system. Shrub pits shall be at least 1 foot greater than the diameter of the root ball. Planting pits shall not be deeper than the height of the root ball.

G. When excavation occurs in areas of heavily compacted earth, stones, concrete chunks or other foreign matter, pits shall be dug at least 3 times the width of the root ball. Excavated material from plant pits shall be disposed of as required.

H. Container plants shall be removed from their growing container before planting. If roots are densely matted, the outer root mass shall be scored, sliced vertically, with a sharp knife to separate roots. All herbaceous plants and groundcovers shall be evenly spaced to produce a

uniform effect and staggered in rows at intervals designated on the contract drawings.

I. Shrubs and trees shall be set in the center of planting pits, plumb and straight, and at such a level that after settlement the crown of the roots will be 1-inch above the surrounding finished grade. Root ball masses shall not be loosened, broken or damaged. When balled and burlapped plants are set, planting mixture shall be compacted around bases of balls to fill all voids. All tying materials, twine and rope shall be cut and removed. Biodegradable burlap shall be laid back or cut away from the top half of the ball. If a wire basket is present, the upper 2/3 of the basket shall be cut away and removed. Do not remove the entire basket. Roots or bare root plants shall be properly spread out and planting mixture carefully worked in among them. Broken or frayed roots shall be cleanly cut.

J. Backfill plant pits with planting mixture in layers of not more than 9-inches and firmly tamp each layer and water to sufficiently settle the backfilled soil before the next layer is put in place. When the planting pit is 2/3 backfilled, the hole shall be flooded and watered thoroughly so that the water level reaches the top of the planting pit. Allow water to soak in, then complete the backfilling operation. Immediately after planting pit is backfilled, a shallow basin 3-inches deep and slightly larger than the pit shall be formed with a ridge of soil for water retention. Form a common basin for plant materials throughout mass planting beds. After planting, lightly till the soil in planting beds between planting pits and rake smooth to eliminate compaction of soils.

K. All planting hole basins shall be flooded with water twice within the first 24 hours of planting, and watered not less than twice per week until final acceptance of the work.

L. All thin barked deciduous trees shall be wrapped after they are planted and before they are staked. Prior to wrapping, inspect trees for injury to trunks or improper pruning. Take corrective measures as necessary. Wrap trunks of all trees spirally from bottom to top with tree wrap and secure top and bottom at 2-foot intervals with jute twine. The wrapping shall overlap and entirely cover the trunk from the ground to the height of the second branches and shall be neat and snug. Overlap shall be approximately 2-inches.

M. Stake trees immediately after planting as detailed. All staking apparatus shall be adequate to hold the tree in a vertical position under severe weather conditions. All staking apparatus and tree trunk wrapping shall be removed and disposed of off-site by the Contractor at the end of one growing season.

N. Immediately after planting and staking operations are complete, all plant pit basins and plant beds shall be covered with approved mulch to the depths designated on the plans. Mulch shall not contact tree bark, cover tree root flares, or shrub crowns. No mulch shall be applied prior to the first watering.

O. The pruning of trees and shrubs shall only be permitted to remove dead or dying branch limbs and tips, sucker growth, water sprouts, crossing or rubbing branches, broken or damaged branches, diseased or insect infested limbs, and to preserve the natural character of the plant. Plant materials shall be pruned in accordance with AmericanHort Standards and as required by the Engineer. Questionable weak limbs and branch removals that may disfigure the plant shall be left to the discretion of the Engineer. The tree leader shall never be permitted to be cut. Pruning shall be done with clean, sharp tools. All large pruning cuts that are ½-inch in diameter or larger shall be made along the bark branch ridge. Pruning cuts shall not breach or otherwise interfere with the branch collar. All pruning cuts less than ¼-inch diameter shall be made with hand pruners as close to the main stem as possible without damaging the cambium or bud. Tree paint shall not be used to cover pruning cuts.

P. As the work proceeds, the Contractor shall remove all debris from the site, including but not limited to branches, rock, paper, and rubbish. All areas shall be kept clean, neat and in an orderly

condition at all times. Prior to final acceptance, the Contractor shall cleanup the entire area to the satisfaction of the Engineer.

3.02 MAINTENANCE:

A. Maintenance shall begin immediately after each plant is planted and shall continue until completion of the guarantee period and final acceptance of the project. Plants shall be watered, pruned, sprayed, fertilized, cultivated and otherwise maintained and protected. Tree guys and stakes shall be tightened and repaired. Defective work shall be corrected as soon as possible after it becomes apparent and weather and season permit.

B. Settled plants shall be reset to proper grade and position, planting pits and common basins restored, and dead materials removed and replaced. Planting beds and individual basins shall be neat in appearance, maintained to their original layout lines and kept free of weeds. Mulch shall be replaced as required to maintain proper depths.

C. Contractor shall make arrangements to provide sufficient water to maintain all trees, shrubs and plant materials until final acceptance. Plants shall be sprayed with anti-transpirant or anti-desiccant if required by seasonal conditions or as required by the Engineer.

D. Planting areas shall be protected against trespass and damage of any kind during the maintenance period. This shall include the furnishing and installation of approved temporary fencing if necessary. If any plants become damaged during the maintenance period, they shall be treated or replaced as required by the Engineer at no additional cost to the Owner.

3.03 INSPECTION AND PRELIMINARY ACCEPTANCE:

A. Contractor shall provide written notice to the Engineer not less than 10 days before the anticipated date of inspection for preliminary acceptance. The Engineer shall recommend preliminary acceptance of the work of this Section only after completion and re-inspection of all necessary repairs, renewals or replacements.

B. Inspection and acceptance of plantings may be requested and granted in part, provided the areas for which acceptance is requested are relatively substantial in size, and with clearly definable boundaries. Acceptance and use of these areas by the Owner shall not waive any other provisions of this Contract.

3.04 GUARANTEE:

A. All plant materials shall be guaranteed for a period of one year after the date of completion of the specified maintenance period and preliminary acceptance of the project by the Owner.

B. When the work is accepted in part, the guarantee period shall extend from each partial acceptance to the terminal date of the last guarantee period. All guarantee periods terminate at one time.

C. Plants shall be healthy, free of pests and disease. Plants shall exhibit vigorous growth, shall bear foliage of normal density, size and color and shall have no less than seventy-five percent (75%) of their branches alive at the end of the guarantee period. If the leader of any single-leader species is dead, the entire plant shall be considered dead.

D. Any plant required under this Contract that is dead or unsatisfactory, as determined by the Engineer, shall be removed from the site. These shall be replaced as soon as weather permits during the specified planting season, at no additional cost to the Owner, until the plants live through one year.

E. All replacements shall be plants of the same kind and size as specified on the Plant List. They shall be furnished and planted as specified above.

F. The guarantee of all replacement plants shall extend for an additional one-year period from the date of their acceptance as replacement.

G. Guarantee shall not apply to the replacement of unacceptable plants resulting from the removal, loss, or damage due to occupancy of the project in any part; vandalism or acts of neglect on the part of others; physical damage by animals, vehicles, etc.; and Acts of God, including but not limited to, catastrophic fire, hurricanes, riots, war, etc.

H. In the instance of curtailment of water by local water authorities (when supply was to be furnished by the Owner), the Contractor shall furnish all necessary water by water tanker, the cost of which will be approved and paid for by the Owner.

3.05 FINAL INSPECTION AND FINAL ACCEPTANCE:

A. At the end of the guarantee period, the Contractor shall provide written notice to the Engineer not less than 10 days before the anticipated date of final inspection for final acceptance.

B. The Engineer shall recommend final acceptance of the work of this Section only after completion and re-inspection of all necessary repairs, renewals or replacements.

END OF SECTION

Appendix A – Hazardous Building Materials Investigation Reports

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

Asbestos and Hazardous Building Materials Survey
Old Jameson Store
354 NH Route 25
Warren, NH

NHDES Site #: 202111041
Project Type: SITEEVALHW
Project Number: 40376

Prepared For:
New Hampshire Department of Environmental Services
Brownfields Program
Hazardous Waste Remediation Bureau
29 Hazen Drive, PO Box 95
Concord, New Hampshire 03302-0095
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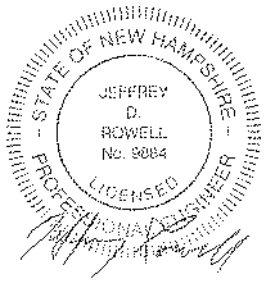

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Jennifer Milbury Digitally signed by Jennifer Milbury Date: 2022.04.26 14:38:01 -04'00'

Date of Report: April 26, 2022

Known for excellence.
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Asbestos and Hazardous Building Materials Survey

Former Jameson Store
354 NH Route 25
Warren, New Hampshire

NHDES Site #202111041 Project# 40376

April 26, 2022
File No. 04.0190987.23

PREPARED FOR:
New Hampshire Department of Environmental Services
Concord, New Hampshire

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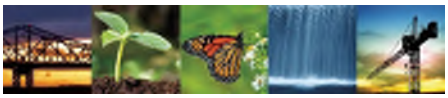

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April 26, 2022
File No. 04.0190987.23
NHDES Site #202111041 Project# 40376

Ms. Melinda Bubier
New Hampshire Department of Environmental Services
Brownfields Program
Hazardous Waste Remediation Bureau
29 Hazen Drive, PO Box 95
Concord, New Hampshire 03302-0095

RE: Asbestos and Hazardous Building Materials Survey
Old Jameson Store
354 NH Route 25
Warren, New Hampshire

Dear Ms. Bubier:

GZA GeoEnvironmental, Inc. (GZA) is pleased to submit this Asbestos and Hazardous Building Materials Survey Report to the New Hampshire Department of Environmental Services (NHDES) for the above-listed property. The survey work was conducted on December 16, 2021, and January 28, 2022, and in general accordance with GZA's Proposal No. 04.000341.22 dated November 2, 2021. This report is subject to the Limitations provided below and in **Appendix A**.

Please contact any of the undersigned with any questions you may have pertaining to the information in this report. Thank you for this opportunity to be of service to you.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

David G. Oliver, C.M.C.
Senior Consultant

Steven R. Lamb, P.G., C.G.W.P
Consultant / Reviewer

Jeffrey D. Rowell, P.E.
Principal

DGO/SRL/JDR: jkm
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Attachment: Report

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APPENDICES

1.0 INTRODUCTION AND PURPOSE

1.1 INTRODUCTION

This report presents the findings of an asbestos and hazardous building materials survey (Survey) conducted by GZA GeoEnvironmental, Inc. (GZA) for the structures located at 354 NH Route 25, Warren, New Hampshire (Site). The survey work was conducted on December 18, 2021, and on January 28, 2022, in general accordance with GZA's Proposal No. 04.000341.22 dated November 2, 2021. This report is subject to the Limitations in **Appendix A**.

1.2 PROJECT OBJECTIVE

The purpose of our work was to identify potential hazardous building materials that may impact future demolition plans and to develop an inventory of hazardous building materials to support preliminary demolition planning for the Site.

The objective of our work was to perform a walkthrough of the accessible portions of the Site structures of the above- referenced Site to identify and evaluate for the presence and condition of suspect asbestos-containing materials (ACMs), lead-containing paint (LCP), polychlorinated biphenyls (PCBs), and other visually observed universal wastes (UWs) and hazardous materials. The work included:

- The collection of bulk samples of observed representative suspect ACMs, LCPs, and caulking, glazing, paints, or sealants suspected of containing PCBs;
- Quantification of identified ACMs, LCP, hazardous materials, and UW;
- Limited Site Reconnaissance of the exterior of the property for Recognized Environmental Conditions; and
- Assessment of the level of effort and cost to demolish and dispose of the buildings.

1.3 PROJECT STRATEGY

Our Survey was limited to materials that were visible and accessible during the survey of the Site buildings. Due to the questionable structural integrity of the Site buildings, interior sampling was not conducted as part of this survey. Efforts were made to access the interiors of pipe chases and wall cavities by using available access hatches, but it should be noted that certain interstitial building voids and spaces could not be accessed without disassembly of the building or use of destructive methods. Charged electrical systems and energized mechanical and pneumatic equipment were not sampled as part of this survey. GZA did not dismantle mechanical equipment within the Site buildings. Although reasonable effort was made to survey accessible suspect materials, additional suspect but unsampled materials could be located in walls, voids or in other concealed areas. Furthermore, it is assumed that no active effort, intentional or otherwise, was made to cosmetically hide potentially salient features or conditions from GZA.

2.0 SITE DESCRIPTION

The Site consists of an irregularly shaped, parcel of land addressed as 354 NH Route 25 in Warren, New Hampshire, and identified by the Town of Warren as Parcel 000240, 045000. The Site is situated on the eastern side of NH Route 25 and improved with a vacant residential/commercial building, and the remains of a former storage shed. The eastern side of the parcel is boarded by the Baker River. GZA understands that the main Site building was previously used as a general store (Jameson Store) and a single-family residence. The Site was abandoned some time prior to 2017, and a major flooding event in 2017 damaged the buildings.

The Old Jameson Store is a two-story wood-framed, approximately 1,600-square-foot structure with a stone and wood foundation. The roofing system consists of a rubber membrane on a flat roof. Exterior walls are finished with wood

clapboard siding with a painted finish with vinyl siding on the upper east side of the building. Windows consist of double-hung wood-framed windows. Heat is supplied to the building by a ducted oil-fired forced hot- air heating system. Interior finishes of the Old Jameson Store consist of gypsum board and slat wood walls and ceilings with a painted finish. Floors are finished with wood slat with a painted finish, with unfinished concrete flooring located in the basement.

The residential wing of the building is located on the north side of the structure and consists of a two-story wood- framed approximately 1,500-square-foot structure with a stone and wood foundation. The roofing system consists of a gable roof with asphalt shingles on wood decking. Exterior walls are finished with wood clapboard siding with a painted finish. Windows consist of double-hung wood-framed windows. Interior walls and ceilings located within the residential area of the building consist of gypsum board with a painted finish. Flooring finishes consist of carpet, vinyl plank, and wood slat with unfinished concrete located in the basement.

The East addition located on the Old Jameson Store is an approximately 400-square-foot single-story wood- framed structure. The addition is level with the first floor of the Old Jameson Store and is supported with wood beams tied into the original structure. The East addition roofing system consist of a rubber membrane on a flat roof. Exterior walls are finished with wood clapboard siding with a painted finish, with an asphaltic sheeting with faux brick pattern located on the north side. The windows consist of double-hung wood-framed units. Interior finishes for the East addition consist of gypsum board and slat wood walls and ceilings with a painted finish. The floor was finished with a vinyl floor tile.

The former shed debris pile is located to the northeast of the building and is an approximately 300-square-foot area consisting of wood components and asphalt shingles.

3.0 SCOPE OF SERVICES

The Scope of Work involved visually identifying and classifying conditions, collecting representative samples of suspect materials for analysis, and integrating and reporting our findings in a written report. Due to the building condition, GZA conducted limited observations of building structural components, utility systems (electrical, mechanical, and plumbing), building contents, and the suspect materials comprising or associated with the Site building exterior.

4.0 INVESTIGATION PROCEDURES

Results of the investigation are described below.

4.1 ASBESTOS INVESTIGATION

The asbestos survey conducted at the Site on January 28, 2022, was performed by Mr. Andrew Pomeroy, a United States Environmental Protection Agency- (USEPA-) accredited Asbestos Inspector (Certificate # 22-4291-106-262357). A copy of Mr. Pomeroy's asbestos inspector certificate is attached as **Appendix B.**

4.1.1 Asbestos Sampling

Suspect ACM sampling was conducted on the accessible areas of the Site building and former shed debris pile. Homogeneous areas of suspect ACM were visually identified and documented. Procedures for locating and identifying suspect ACM were based on guidelines published by the USEPA.[1] A homogeneous area consists of building materials

[1] Environmental Protection Agency, Guidelines for Controlling Asbestos-Containing Materials in Buildings, Office of Pesticides and Toxic Substances, EPA Report Number 560/5-85-024, June 1985.

that appear similar throughout in terms of color, texture, and date of application. Building materials identified as concrete, glass, wood, masonry, metal, or rubber thermal system insulation were not considered suspect ACM.

A physical assessment of each homogeneous area of suspect ACM was conducted to assess the friability and condition of the materials. A friable material is defined by the USEPA as a material which can be crumbled, pulverized, or reduced to powder by hand pressure when dry. Friability was assessed by physically touching suspect materials.

Based on results of the visual observation, bulk samples of suspect ACM were collected in general accordance with the sampling protocols outlined in USEPA Asbestos Hazard Emergency Response Act (AHERA) Regulation 40 CFR 763. It was assumed that discrete suspect ACM were sufficiently uniform in composition to permit random samples of suspect materials to be collected in each homogeneous area. GZA collected bulk samples while wearing appropriate personal protection equipment and using wet methods, as applicable, to reduce the potential for fiber release. Samples were placed in individual resealable plastic bags, wet wiped of visible debris, labeled with unique sample numbers using indelible ink, recorded, and dispatched to an accredited laboratory for analysis following chain-of-custody (COC) protocol. In total, 40 bulk samples were collected from 15 homogeneous materials. A summary of suspect ACM samples collected during the survey is presented in **Table 1**.

4.1.2 Sample Analysis

Bulk samples were submitted under COC to EMSL Analytical, Inc. (EMSL), located in Woburn, Massachusetts, for analysis using the USEPA Interim Method for the Determination of Asbestos in Bulk Building Materials (USEPA/600/R-93/116) via Polarized Light Microscopy with Dispersion Staining (PLM/DS). The percentage of asbestos, where applicable, was determined by stereomicroscopic visual estimation. The lab is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP - Accreditation No. 101147-0). Copies of the laboratory's accreditations are provided in **Appendix B**. The laboratory was instructed to analyze samples from each homogeneous area until the first sample containing asbestos was identified.

4.1.3 Asbestos Analytical Results

Utilizing the USEPA and OSHA protocol and criteria, laboratory analysis confirmed the presence of asbestos in the window glazing. A summary of the classification, condition, and approximate quantity of identified ACM is presented in **Table 2**. A copy of the asbestos laboratory analytical reports and COC forms are included in **Appendix C**.

4.2 LEAD-CONTAINING PAINT SAMPLING

The lead paint sampling was performed by GZA's industrial hygienist, Mr. Andrew Pomeroy.

4.2.1 Lead-Containing Paint Sampling

The lead paint sampling included the performance of an Occupational Safety and Health Administration (OSHA) pre- demolition/demolition lead paint assessment at the Site building. The OSHA assessment was performed in compliance with the United States Department of Labor OSHA Lead Exposure in Construction Standard (29 CFR 1926.62) and USEPA Hazardous Waste Disposal Regulations (40 CFR Parts 260 through 271). The assessment was performed by collecting paint chip samples from representative accessible exterior painted surfaces observed on the building and analyzing the samples to provide an indication of the presence of lead from testing combinations that were present to potentially create a lead hazard to workers in the course of the demolition of the building. The assessor scraped down to the substrate to remove all layers of paint on interior and exterior surfaces. Paint chip samples were collected in accordance with the sampling guidelines established in the US Department of Housing and Urban Development *Guidelines for the Evaluation and Control of Lead-Based Paint (LBP) Hazards in Housing,* Chapter 7 revision of 1997.

Samples were individually collected in resealable bags, which were consolidated into sample delivery groups. Samples were double-bagged prior to shipment via courier for off-site laboratory analysis, accompanied by the sample recording sheets and COC documents. In total, five samples were collected and submitted for analysis. A summary of the paint samples is presented in **Table 3**.

4.2.2 Lead Paint Sample Analysis

EMSL analyzed the paint samples for lead content using flame atomic absorption spectroscopy National Institute for Occupational Safety and Health Method SW 846 3050B/7000B. EMSL is accredited for lead in paint analysis under the Environmental Lead Laboratory Accreditation Program (ELLAP Accreditation No. 180179). A copy of the laboratory's accreditations is included as **Appendix B**.

4.2.3 Paint Analytical Results

Lead was identified to be present in all five of the paint samples collected from the exterior of the Site buildings. As indicated in the attached results, the lead concentration in the samples collected from the siding and trim paints of the Site buildings ranged from 4.2% to 29% by weight lead content; therefore, all five paint samples are defined as LCP. Paint sampling results are presented in **Table 3,** and a copy of the laboratory analytical report is attached as **Appendix D**.

4.3 UNIVERSAL WASTES INVESTIGATION

The UW investigation was completed at the Site by GZA's industrial hygienist, Mr. Andrew Pomeroy, on January 28, 2022.

4.3.1 Universal Wastes Assessment

During the Site survey work, GZA conducted a visual survey of residual UW, potential PCB-containing components, and miscellaneous stored chemicals, petroleum products, and gases. UW, defined as 40 CFR Part 273 by the USEPA, includes hazardous wastes that are pesticides or electrical system components such as batteries, thermostats, and mercury- containing lamps. Varying types of other hazardous materials present requiring proper disposal prior to renovation/demolition were identified in the Site buildings. With the exception of the sampling of sealants/caulk/paints/glazing materials for the presence of PCBs as outlined in **Section 4.3.2**, our inventory of hazardous materials was based on a visual assessment only; therefore, no sampling or characterization of wastes was performed. A detailed inventory, which includes the location and quantity of the hazardous materials, is presented in **Table 4**. The materials identified in **Table 4** must be managed and disposed of in accordance with current State and federal hazardous waste management regulations.

4.3.2 PCB Sampling

During the investigation, GZA visually identified building construction materials that were suspected of potentially containing PCBs. The limited PCB assessment was performed by collecting bulk samples from representative accessible caulks and paints observed on the exterior and interior of the buildings and analyzing the samples to provide an indication of the presence of PCBs in the materials that were present that potentially could create a hazard to workers during the course of the demolition of the buildings or require special management and disposal. Samples were placed in individual resealable plastic bags, wet wiped of visible debris, labeled with unique sample numbers using an indelible marker, recorded, and dispatched to an accredited laboratory for analysis following COC protocol. In total, two samples were collected and submitted for analysis for PCBs.

4.3.3 PCB Sample Analysis

ESS Laboratories (ESS), located at 185 Frances Avenue in Cranston, Rhode Island, analyzed the bulk samples for PCB content using gas chromatography USEPA Method 8082 (Soxhlet extraction), Test Methods for Evaluating Solid Waste. ESS is accredited for PCB in solid waste analysis, ELAP Accreditation No. 242421.

4.3.4 PCB Analytical Results

As indicated in the attached laboratory analytical results, PCBs were identified to be present in one of the samples collected from the Site. The window glazing associated with the west and south windows of the Old Jameson Store was analyzed to contain 1.6 parts per million (ppm) of PCBs. Please refer to **Section 6.0** for hazard communication requirements that are applicable for this material. PCBs were not identified to be present in the remaining sample collected from Site buildings. PCB results are provided in **Table 5,** and a copy of the laboratory analytical reports are provided in **Appendix E**.

4.4 SITE RECONNAISSANCE

The purpose of GZA's Site reconnaissance was to observe current, exterior Site conditions for evidence of recognized environmental conditions (RECs) that could result in the presence of oil or hazardous materials in the environment at the Site. GZA Assistant Project Manager, Ms. Megan Murphy, conducted a Site reconnaissance of the Site exterior on December 16, 2021. GZA documented its observations and photo-documented pertinent features and/or areas of environmental concern, which we reference in this Asbestos and Hazardous Building Materials Survey Report. Selected photographs are included in **Appendix F**.

The following factors limited GZA's Site reconnaissance:

- At the time of the Site visit, portions of the ground surface surrounding the Site building were covered by snow. Direct observations of the ground surface in these areas could not be made as part of GZA's Site reconnaissance. Based on the retail and residential use of the Site, in GZA's opinion, the presence of snow cover does not represent a significant data gap. Should further assessment of the ground surface be required, a follow-up Site reconnaissance following snowmelt would be required; and
- The environmental Site reconnaissance was limited to the exterior of the Site building structures. Limited accessibility to the Site building basement was available through an exterior opening along the eastern side of the building. However, the remaining interior portions of the Site structure could not be accessed and appeared to be in significant disrepair.

The following table discusses features of potential environmental concern that we observed at the Site.

Item	Yes	No	Description
Aboveground storage tank (AST) systems	*V*		Two approximately 275-gallon heating oil tanks were observed within the basement of the Site building. The associated fill and vent pipes were observed along the southwestern corner of the Site building. The tanks were in fair condition and appeared to be located above an earthen portion of the basement floor. Staining was observed directly beneath the tanks. It is GZA's opinion that the observed staining and apparent earthen floor located directly beneath the tanks is considered a REC.
Underground storage tank (UST) systems		*V*	Not observed.
Chemical or petroleum storage or handling areas		*V*	Not observed.

Item	Yes	No	Description
Chemical waste or petroleum waste storage or handling areas	*V*		Approximately one-gallon of petroleum-like liquid was observed within the basement. This liquid was observed both free-floating within a small plastic bin and partially contained within a one-gallon plastic container, which was also located within the plastic bin. Although there was a significant amount of dust and debris located on the basement floor, no apparent staining was observed beneath the plastic bin. Two 55-gallon black steel drums were observed at the Site: one partially buried along the north side of the Site building and one within the front porch area on the west side of the building. The drum located on the front porch area was unlabeled and appeared empty. The label on the partially buried 55-gallon drum was obscured; however, reference was made to the American Refining Group, which produces oils, lubricants, solvents, and waxes. This drum appeared empty. Due to snow cover and solid waste debris, GZA was unable to observe whether staining was beneath this drum. In GZA's opinion, the unknown drum contents and inability to observe the ground surface beneath or surrounding the drum is considered a data gap.
Dumpsters		*V*	Not observed.
Floor drains, trenches, sumps, and associated piping		*V*	Not observed.
Oil/water separators		*V*	Not observed.
Stormwater drains, grates, and associated piping		*V*	Not observed.
Drainage swales, culverts, impoundments, and surface water bodies	*V*		Baker River adjoins the Site directly to the east. During 2007, heavy rainfall caused Baker River to flood, damaging the Site building and depositing significant amounts of gravel and boulders in the eastern portion of the Site.

Item	Yes	No	Description
Septic systems, leach fields, seepage pits, and dry wells		*V*	The Warren Fire Marshall reported that a former septic and leach field system was located to the east of the Site building. However, it was destroyed during a large flood in 2007. Evidence of the former leach field was not observed.
Open pipe discharges		*V*	
Landfills and solid waste dumping	*V*		Miscellaneous solid waste was observed to the north, east, and south of the Site building. Waste included car chairs, carpets, sinks, tires, wood debris and furniture, various plastic and metal containers, plastic bags, half of a plastic 55-gallon drum, empty 5-gallon buckets, and foam cushion debris, and televisions.
Historical fill or other fill material		*V*	Not observed.
Staining or stressed vegetation		*V*	Not observed.
Electrical transformers or capacitors		*V*	Not observed.
Hydraulic Equipment, including lifts, elevators, and compactors		*V*	Not observed.
Active or inactive production wells		*V*	Not observed.
Monitoring wells, former boreholes, or other evidence of environmental investigations		*V*	Not observed.
Other observations potentially indicative of the presence of RECs		*V*	Not observed.
Observed *de minimus* conditions	*V*		A shed and the former leach field and septic system were destroyed as a result of a large flood during 2007. Subsurface materials and debris from these structures may be geotechnically unsuitable for future construction purposes and may require characterization, handling, and proper disposal.

5.0 ASBESTOS REGULATORY OVERVIEW

5.1 ASBESTOS

USEPA regulation 40 CFR 61, Subpart M, ***National Emission Standards for Hazardous Air Pollutants (NESHAPS*)**, and the NHDES regulate asbestos fiber emissions during renovation or demolition activities and asbestos waste disposal practices at both publicly and privately owned and operated facilities in the State. These regulations also require the identification and classification of existing building materials prior to demolition or renovation activity. Under NESHAP and New Hampshire regulations, asbestos-containing building materials are defined as materials containing 1 percent (%) or more of asbestos content and are classified as either friable, Category I non-friable, or Category II non-friable ACM. Friable materials are those that, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. Category I non-friable ACM includes packings, gaskets, resilient floor coverings, and asphalt roofing products containing more than 1% asbestos. Category II non-friable ACM are any materials other than Category I materials that contain more than 1% asbestos.

Friable ACM, along with Category I and Category II non-friable ACM, which is in poor condition and has become friable or which will be subjected to drilling, sanding, grinding, cutting, or abrading and which could be crushed or pulverized during anticipated renovation or demolition activities are considered regulated ACM (RACM).

RACM must be removed prior to renovation or demolition activities which will disturb the materials. The owner or operator of a facility must provide the NHDES with written notification of planned removal activities at least 10 working days prior to the commencement of asbestos abatement activities. Removal of RACM must be conducted by a NHDES- licensed asbestos abatement contractor. Third party area air clearance air testing must be performed at the conclusion of the abatement activities and prior to re-occupancy of the removal areas.

The OSHA Asbestos standard for construction (29 CFR 1926.1101) and general industry (29 CFR 1910.1001) regulates workplace exposure to asbestos. The OSHA standards requires that employee exposure to airborne asbestos fibers be maintained below 0.1 asbestos fibers per cubic centimeter of air as an 8-hour time-weighted average. The OSHA standards classifies construction and maintenance activities which could disturb ACM and specifies work practices and precautions which employers must follow when engaging in each class of regulated work. States which administer their own federally-approved State OSHA programs may require additional precautions.

5.2 LEAD PAINT

Lead is regulated by the USEPA, the State of New Hampshire, and OSHA. The USEPA and New Hampshire regulate the use, removal, and disposal of lead-based paint (LBP), and OSHA regulates lead exposure to workers. The USEPA and New Hampshire define LBP as paint, varnish, stain, or other applied coating that contains lead equal to or greater than 1.0 milligrams per square centimeter, 5,000 milligrams per kilogram, or 0.5% by dry weight as determined by laboratory analysis. For the purpose of the OSHA lead standard, the lead includes metallic lead, all inorganic lead compounds, and organic lead soaps.

The Resource Conservation and Recovery Act (RCRA) gave the USEPA authority to regulate the waste status of demolition or renovation debris, including lead-containing materials. Specific notification and testing requirements must be addressed prior to transporting, treating, storing, or disposing of hazardous wastes. Lead-containing wastes are considered hazardous waste under RCRA if Toxicity Characteristic Leaching Procedure results for lead exceed 5 milligrams per liter. However, in certain situations, residential lead-containing construction debris may be exempt from RCRA.

Detectable lead concentrations may constitute a lead dust hazard during renovation/demolition activities. Personnel performing renovation/demolition activities that may disturb painted components with concentrations of lead above the designated analytical detection limit should comply with all current OSHA regulations in order to minimize employee exposure. OSHA defines lead-containing paint as a paint which contains lead, regardless of the concentration. Currently, any proposed renovation/demolition is subject to the OSHA regulations (29 CFR 1926.62 – Lead Exposure in Construction). The OSHA regulation defines specific training requirements, engineering controls, and working practices for construction personnel subject to this standard. Occupational exposure to lead occurring in the course of construction work, including maintenance activities, painting, alteration, and repairs, is subject to the OSHA "Interim" Lead Exposure in Construction standard.

Construction work covered by 29 CFR 1926.62 includes any repair or renovation activities or other activities that disturb in-place lead-containing materials but does not include routine cleaning and repainting where there is insignificant damage, wear or corrosion of existing lead-containing coatings or substrates. Employers must assure that no employee will be exposed to lead at concentrations greater than 50 micrograms per cubic meter ($\mu g/m^3$) averaged over an 8-hour period without adequate protection. The OSHA Standard also establishes an action level of 30 $\mu g/m^3$ which, if exceeded, triggers the requirement for medical monitoring. The USEPA and State of New Hampshire require that contractors retained to perform renovation, repair, or painting in residential buildings built before 1978 to be certified in lead-safe renovation practices. If, in the future, the Site is intended to house children under the age of six, a comprehensive LP inspection is required after renovation activities have been completed. Should any LP hazards remain, a State of New Hampshire-licensed Deleading contractor must be hired to abate the remaining LBP. Following the abatement, a licensed lead paint inspector must perform a visual re-inspection. Upon the lead paint inspector's approval and prior to re- occupancy of the Site, Letters of Initial or Full Deleading Compliance must be obtained.

The above overview is not intended to be inclusive of all potentially pertinent regulatory information. The relevant USEPA, New Hampshire, and OSHA standards should be consulted prior to undertaking activities involving the demolition, renovation, or maintenance of surfaces coated with lead paints.

5.3 UNIVERSAL WASTES AND PCB-CONTAINING MATERIALS

Universal wastes are regulated by the USEPA, the State of New Hampshire, and OSHA. The USEPA and New Hampshire regulate the use, removal, and disposal of UWs, and OSHA regulates exposure to workers. Universal wastes must be managed and disposed of in accordance with current State and federal hazardous waste management regulations.

The USEPA and the State of New Hampshire regulate the disposal of material containing PCBs. The Toxic Substances Control Act and the implementing regulations found at 40 CFR 761 require that caulks/sealants/glazing containing concentrations of PCBs of 50 ppm or greater must be disposed of as PCB bulk product waste in a permitted solid waste landfill or by completing a risk-based disposal process. Under USEPA's 2012 reinterpretation of 40 CFR 761, building materials impacted by migrating PCBs from adjacent PCB-containing caulks may be regulated under 40 CFR 761.62 as bulk product waste, provided the impacted building material is removed at the same time as the source material and managed appropriately.

Certain materials with PCB concentrations between 1 ppm up to 50 ppm may be categorized as Excluded PCB Products (see 40 CFR 761.3), provided they meet certain specific criteria. Any waste materials containing PCBs at any concentration have additional disposal considerations and require disposal at facilities that are permitted to accept such PCB-containing wastes.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the asbestos, lead paint, and hazardous materials assessment detailed above, the following conclusions and recommendations are made:

- Laboratory analysis of the samples collected during the asbestos survey confirmed the presence of ACMs in the Site building, including the window glazing associated with the residence area north windows. If additional materials are identified during building demolition that were not previously identified by GZA, these materials will require testing;
- The LCP sampling identified paint with lead content to be present in the exterior trim and siding paints of the building;
- During the survey, UW were visually observed to be present in the building, including but not limited to fluorescent light bulbs, ballasts, mercury-containing switches, a water heater, CFC refrigerants, two aboveground storage tanks, and several containers with unknown content and solid waste debris;
- Laboratory analysis confirmed the presence of PCBs in window glazing associated with the west and south windows of the Old Jameson Store;
- Site reconnaissance identified RECs and data gaps, including stained soils located in proximity to the basement oil storage tanks, a container with a petroleum-based product, containers with unknown content, and miscellaneous solid waste scattered about the Site;
- Due to the presence of ACM, LCP, PCBs, and UW identified within, and on the Site building, GZA recommends that project-specific abatement bid specifications be developed for use in obtaining contractor pricing and developing construction sequencing;
- Prior to conducting renovation or demolition activities impacting confirmed or hazardous materials, retain a qualified contractor to remove hazardous materials;
- Notify contractors of the potential asbestos, LCP, PCBs, and UW hazards per OSHA's Hazard Communication Rule (29 CFR 1910.1200); and

- Universal wastes may either be removed and recycled or disposed of in accordance with applicable State and federal regulations before demolition. If scheduled to be impacted and prior to the demolition work, the heating, ventilation, and air conditioning units should be assessed to determine if the unit contains Freon gas and, if present, the gas should be removed and collected from the unit using USEPA-approved equipment and procedures, and in accordance with the USEPA regulations under the Clean Air Act.

7.0 PRELIMINARY ORDER OF MAGNITUDE ABATEMENT COST ESTIMATE

Based on the recent limited hazardous building material assessment completed at the Site, GZA developed a preliminary order of magnitude cost estimate for the removal of the ACM, UW, and PCBs observed at the Site, attached as Table 6. The cost estimate is based on the estimated quantities identified in Tables 2, 3, and 4.

Tables

TABLE 1
SUSPECT ACM SAMPLE INVENTORY
NH DEPARTMENT OF ENVIRONMENTAL SERVICES
Old Jameson Store
354 Route 25
Warren, New Hampshire

SAMPLE NUMBER	MATERIAL DESCRIPTION	MATERIAL LOCATION	ANALYTICAL RESULTS
Old Jameson Store			
012822B-301	Siding paper, red	Exterior, south wall, east side	NAD
012822B-301B	Siding paper, red	Exterior, south wall, center	NAD
012822B-301C	Siding paper, red	Exterior, south wall, west side	NAD
012822B-302	Siding paper, black	Exterior, west wall, north	NAD
012822B-302B	Siding paper, black	Exterior, west wall, south	NAD
012822B-302C	Siding paper, black	Exterior, north wall, second floor, west side	NAD
012822B-303	Window glazing, white	Exterior, west windows, north window	NAD
012822B-303B	Window glazing, white	Exterior, west windows, south window	NAD
012822B-304	Felt paper, black	Exterior, west side, on concrete foundation	NAD
012822B-304B	Felt paper, black	Exterior, west side, on concrete foundation	NAD
Residential Area			
012822B-01	Window caulk, white	Exterior, north side, west window	NAD
012822B-01B	Window caulk, white	Exterior, north side, west window	NAD
012822B-02	Window glazing, white	Exterior, north side, east window	**2% Chrysotile**
012822B-02B	Window glazing, white	Exterior, north side, second floor window	**NA/PS**
012822B-03	Siding paper, red/black	Exterior, north wall, west side	NAD
012822B-03B	Siding paper, red/black	Exterior, north wall, east side	NAD
012822B-03C	Siding paper, red/black	Exterior, north wall, east side, north of east door	NAD
012822B-04	Fiberglass batt insulation paper, brown	Exterior, north side of porch, east	NAD
012822B-04B	Fiberglass batt insulation paper, brown	Exterior, north side of porch, towards center of	NAD
012822B-04C	Fiberglass batt insulation paper, brown	Exterior, north side of porch, west	NAD
012822B-05	Asphalt shingles, black	Exterior, gable roof, west side, southwest	NAD
012822B-05B	Asphalt shingles, black	Exterior, gable roof, west side, northwest	NAD
012822B-05C	Asphalt shingles, black	Exterior, gable roof, north side, northwest corner	NAD
012822B-06	Roofing felts, black	Exterior, gable roof, west side, southwest	NAD
012822B-06B	Roofing felts, black	Exterior, gable roof, west side, northwest	NAD
012822B-06C	Roofing felts, black	Exterior, gable roof, north side, northwest corner	NAD
East Addition			
012822B-201	Fiberglass insulation board paper, silver	Exterior, underside of addition, southwest	NAD
012822B-201B	Fiberglass insulation board paper, silver	Exterior, underside of addition, southeast	NAD
012822B-201C	Fiberglass insulation board paper, silver	Exterior, underside of addition, northeast	NAD
012822B-202	Faux brick asphalt siding, black/faux brick	Exterior, north side, east	NAD
012822B-202B	Faux brick asphalt siding, black/faux brick	Exterior, north side, towards center	NAD
012822B-202C	Faux brick asphalt siding, black/faux brick	Exterior, north side, west	NAD
012822B-203	Siding paper, black	Exterior, north side, beneath B-202	NAD
012822B-203B	Siding paper, black	Exterior, north side, beneath B-202B	NAD
012822B-203C	Siding paper, black	Exterior, north side, beneath B-202C	NAD
012822B-204	Asphalt felt patch, black	Exterior, southwest corner, at edge of East Addition and Old Jameson Store	NAD
012822B-204B	Asphalt felt patch, black	Exterior, southwest corner, at edge of East Addition and Old Jameson Store	NAD
Former Shed Debris Pile			
012822B-101	Asphalt shingles, black	Exterior, north	NAD
012822B-101B	Asphalt shingles, black	Exterior, south	NAD
012822B-101C	Asphalt shingles, black	Exterior, towards center	NAD

TABLE 2
CONFIRMED and ASSUMED ASBESTOS-CONTAINING MATERIAL RESULTS
Old Jameson Store
354 Route 25
Warren, New Hampshire

MATERIAL DESCRIPTION	MATERIAL LOCATION	PERCENT/TYPE ASBESTOS	USEPA CATEGORY	CONDITION	ESTIMATED QUANTITY	
Window glazing, white	Exterior, Residence area, associated with multi-pane windows on the north side. 2 units @ 18LF/unit	**2% Chrysotile**	Cat. II Nonfriable	Good	36	LF
Roofing materials, black	Exterior, Residence are and east addition roofs	**Assumed ACM**	Cat. I Nonfriable	Good	1,200	SF
12" X 12" Floor tile and associated mastic	East adddition, first floor	**Assumed ACM**	Cat. I Nonfriable	Good	400	SF
Vinyl plank flooring, wood pattern and associated mastic	Residence, first floor, living room, kitchen	**Assumed ACM**	Cat. I Nonfriable	Good	200	SF
Sheet flooring , white with 4" square pattern, and associated mastic	Residence, first floor, bathroom	**Assumed ACM**	Cat. I Nonfriable	Good	50	SF
Gypsum wallboard with tape and joint compound, white	First and second floors, throughout	**Assumed ACM**	RACM	Good	3,000	SF
Boiler gaskets, tan-gray	Bsement, boiler room	**Assumed ACM**	RACM	Good	10	SF
Electric wire insulation wrap, black, white	Basement, first and second floors	**Assumed ACM**	Cat. II Nonfriable	Good	600	LF

NOTES:

1. LF = Linear Feet, SF = Square Feet

2. RACM: Includes materials that, when dry, may be crumbled, pulverized or reduced to powder by hand pressure.

3. Category I Non-friable: Includes asbestos-containing packings, gaskets, asphaltic roofing products, resilient flooring, pliable sealants and mastics.

4. Category II Non-friable: Includes any non-friable materials other than Category I materials that contain more than 1% asbestos.

This summary includes the location, material type, and approximate quantities of accessible asbestos identified in the site building. Quantities of materials were assessed by a non-calibrated wheeled tape measure or visual estimation and should be considered as approximate values. It should be noted that these are only estimates, and are based on limited visual observations of accessible areas of the site.

TABLE 3
LEAD PAINT CHIP SAMPLE SUMMARY
NH DEPARTMENT OF ENVIRONMENTAL SERVICES
Old Jameson Store
354 Route 25
Warren, New Hampshire

SAMPLE NUMBER	MATERIAL DESCRIPTION	MATERIAL LOCATION	LEAD CONTENT (% by weight)	ESTIMATED QUANTITY
Residence Building				
012822LCP-01	Paint, white	Exterior, siding paint	**14%**	1,700 SF
012822LCP-02	Paint, green	Exterior, trim paint	**26%**	120 SF
Old Jameson Store				
012822LCP-301	Paint, white	Exterior, siding paint	**29%**	2,000 SF
012822LCP-302	Paint, white	Exterior, trim paint	**4.2%**	60 SF
East Addition				
012822LCP-201	Paint, white	Exterior, siding paint	**25%**	700 SF

NOTES:

1. LF = Linear Feet, SF = Square Feet

2. Analysis conducted for lead via NIOSH Method SW846-3050B/7000B.

TABLE 4
PCB SAMPLE SUMMARY
Old Jameson Store
354 Route 25
Warren, New Hampshire

SAMPLE NUMBER	MATERIAL DESCRIPTION	MATERIAL LOCATION	CONCENTRATION (PPM)- TYPE PCB	ESTIMATED QUANTITY	
012822PCB-01	Window glazing, white	Exterior, Residence area, north side windows. 2 units at 18 LF/unit	BDL	36	LF
012822PCB-301	Window glazing, white	Exterior, Old Jameson Store, associated with the west and south windows. 9 units @ 28 lf/unit	**1.6 - Aroclor 1254**	252	LF
	USEPA level of PCB content in material defined as PCB bulk waste		≥50		

NOTES:
1. LF = Linear Feet, SF = Square Feet
2. PPM: Parts per million
3. BDL: Below Detection Limit.
4. Analysis conducted for PCBs via USEPA Method 8082A.
5. Samples analyzed by ESS Laboratory of Cranston, RI. Samples were collected by GZA's Industrial Hygienist Andrew Pomeroy.

TABLE 5
Hazardous Materials Inventory
Old Jameson Store
354 Route 25
Warren, New Hampshire

MATERIAL DESCRIPTION	HAZARD	ESTIMATED QUANTITY		NOTES
Interior				
Fluorescent light bulbs	Mercury	10	Units	
Fluorescent light ballasts	PCBs/DEHP	10	Units	
Water heater	Mercury	1	Unit	
Portable air conditioning unit	CFCs	1	Unit	
Television	Metals	1	Unit	
Motor oil	Oils	1	Unit	1 gallon container
Aboveground storage tanks	Oils/PCBs	2	Units	Approximately 275 gallons per unit
Exterior				
Hydraulic fluid	Oils	1	Unit	5 gallon pail
Televisions	Metals	2	Units	
Portable heater	Metals	1	Unit	
Abandoned pails	Unknown	2	Units	
Abandoned drums	Unknown	2	Units	55 gallon drum

NOTES:

This summary includes the location, material type, and approximate quantities of accessible hazardous materials identified in the site building. Quantities of materials were assessed by a non-calibrated wheeled tape measure or visual estimation and should be considered as approximate values. It should be noted that these are only estimates, and are based on limited visual observations of accessible areas of the site.

TABLE 6
PRELIMINARY ORDER OF MAGNITUDE ESTIMATE
Abatement and Demolition of Old Jameson Store
354 Route 25
Warren, New Hampshire

Item	Units	Unit Rate	Demolition	
			Quantity	Price
CONSTRUCTION OVERSIGHT (35 Day Duration)				
Project management/construction manager				$17,000
Travel, expenses, PPE, and misc. equipment				$7,500
Subtotal				***$24,500***
BUILDING ABATEMENT AND DEMOLITION				
Asbestos and Hazardous Material Removal				
Asbestos abatement	LS	$5,000	1	$5,000
Third party perimeter air monitoring	Day	$950	6	$5,700
Disposal characterization	LS	$3,000	1	$3,000
Hazardous material/UW removal	LS	$7,500	1	$7,500
Subtotal				***$21,200***
Building Demolition				
Mobilization/demobilization	LS	$15,000	1	$15,000
Utility cut and caps (water, sewer, telcom, electric)	LS	$17,000	1	$17,000
Dewatering and disposal for utility cut and caps	LS	$13,000	1	$13,000
Building demolition (including slabs, foundations, walkways, loading docks, etc.)	LS	$80,000	1	$80,000
Subtotal				***$125,000***
Restoration				
Backfill building footprint areas with crushed gravel (assume fill to existing surrounding grade elevations)	LS	$20,000	1	$20,000
Grade Site level with underlying earth materials	LS	$15,000	1	$15,000
Subtotal				***$35,000***
General Site Work/Controls				
Work zone controls (security, decon., temporary office & utilities)	LS	$16,000	1	$16,000
H&S and air quality monitoring and PPE	Day	$950	6	$5,700
Dust control	LS	$4,000	1	$4,000
Tracking pad	LS	$9,500	1	$9,500
Erosion and sedimentation control	LS	$10,000	1	$10,000
Subtotal				***$45,200***
TOTAL				**$250,900**
Blanket Contingency 20%				**$50,200**

NOTES:

1. Asbestos abatement, hazardous material removal, and demolition were obtained via contractor estimates. Costs for other items included within the table were obtained via comparable project costs based on estimated volumes and durations for individual tasks associated with completion of the work.
2. Estimate has been rounded to the nearest $1,000.
3. Estimate includes disposal of all demolition debris as non-hazardous.

Appendix A – Limitations

1. GZA GeoEnvironmental, Inc.'s (GZA's) limited asbestos/lead paint/hazardous materials evaluation was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same geographical area, and GZA observed the degree of care and skill generally exercised by other consultants under similar circumstances and conditions. GZA's findings and conclusions must be considered not as scientific certainties, but rather as our professional opinion concerning the significance of the limited data gathered during the course of the asbestos/lead paint/hazardous materials evaluation. No other warranty, expressed or implied, is made. Specifically, GZA does not and cannot represent that the Sites contains no asbestos-containing materials, hazardous materials, polychlorinated biphenyls or other latent condition beyond that observed by GZA during its asbestos/lead paint/hazardous materials evaluation.

2. This survey report, which presents our findings, is not to be used as a bid document/work plan, or in place of a work plan, for conducting asbestos, lead paint (LP), and hazardous materials abatement. When an asbestos abatement work plan is prepared, the USEPA and State of New Hampshire recommend that a certified accredited Asbestos Project Designer prepare the plan. GZA recommends that a work plan be prepared, and a bid walkthrough be administered by certified GZA personnel familiar with the on-Site asbestos conditions.

3. The observations described in this report were made under the conditions stated herein. The conclusions presented in the report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the proposed Scope of Services.

4. The conclusions and recommendations contained in this report are based on limited environmental sampling and visual observations and were arrived at in accordance with generally accepted standards of industrial hygiene practice. No other warranty, expressed or implied, is made.

5. Where sample analyses were conducted by an outside laboratory, GZA has relied upon the data provided, and has not conducted an independent evaluation of the reliability of these data.

6. The purpose of this report was to assess the physical characteristics of the subject Site with respect to the presence of hazardous materials in the Site building. No specific attempt was made to check on the compliance by any party with federal, State, or local laws and regulations.

7. Observations were made of the Sites as indicated within the report. While it was GZA's intent to conduct a thorough survey, it is important to note that we cannot guarantee that all asbestos or potentially hazardous materials within the surveyed area have been identified. ACMs, lead paint, PCBs and universal wastes have frequently been used in areas where detection is difficult until renovation, demolition, and/or asbestos abatement work begins and allows access to these remote areas. Where access to portions of the Sites were unavailable or limited, GZA has provided an opinion as to the likely presence of hazardous materials consistent with the information available. Suspect materials made accessible during demolition activities must be assumed to be hazardous and handled as such, until testing proves otherwise.

Appendix B – Accreditations and Certifications

This is to certify that

Andrew J. Pomeroy

64 West Main Street, Unit 5, Bradford, NH 03221

has completed requisite training by Video Conference, 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

Zoom Video Conference

Institute for Environmental Education 16 Upton Drive Wilmington, MA 01887

January 19, 2022
Course Dates

22-4291-106-262357
Certificate Number

January 19, 2022
Examination Date

January 19, 2023
Expiration Date

Training Director

AIHA Laboratory Accreditation Programs, LLC

acknowledges that

EMSL Analytical, Inc.

5 Constitution Way, Unit A, Woburn, MA 01801

Laboratory ID: LAP-180179

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA LAP), LLC accreditation to the ISO/IEC 17025:2017 international standard, General Requirements for the Competence of Testing and Calibration Laboratories in the following:

LABORATORY ACCREDITATION PROGRAMS

☑	**INDUSTRIAL HYGIENE**	Accreditation Expires: December 01, 2023
☑	**ENVIRONMENTAL LEAD**	Accreditation Expires: December 01, 2023
☑	**ENVIRONMENTAL MICROBIOLOGY**	Accreditation Expires: December 01, 2023
☐	**FOOD**	Accreditation Expires:
☐	**UNIQUE SCOPES**	Accreditation Expires:
☐	**BERYLLIUM FIELD/MOBILE**	Accreditation Expires:

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached Scope of Accreditation. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2017 and AIHA LAP, LLC requirements. This certificate is not valid without the attached Scope of Accreditation. Please review the AIHA LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

Cheryl O. Morton

Cheryl O Morton
Managing Director, AIHA Laboratory Accreditation Programs, LLC

Revision19.1: 07/28/2021

Date Issued: 12/01/2021

AIHA Laboratory Accreditation Programs, LLC

SCOPE OF ACCREDITATION

EMSL Analytical, Inc.
5 Constitution Way, Unit A, Woburn, MA 01801

Laboratory ID: LAP-180179
Issue Date: 12/01/2021

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

The EPA recognizes the AIHA LAP, LLC ELLAP program as meeting the requirements of the National Lead Laboratory Accreditation Program (NLLAP) established under Title X of the Residential Lead-Based Paint Hazard Reduction Act of 1992 and includes paint, soil and dust wipe analysis. Air and composited wipes analyses are not included as part of the NLLAP.

Environmental Lead Laboratory Accreditation Program (ELLAP)

Initial Accreditation Date: 12/01/2018

Component, parameter or characteristic tested	Technology sub-type/Detector	Method	Method Description *(for internal methods only)*
Airborne Dust	AA	NIOSH 7082	N/A
Paint	AA	EPA SW-846 3050B	N/A
		EPA SW-846 3051A	N/A
		EPA SW-846 7000B	N/A
Settled Dust by Wipe	AA	EPA SW-846 3050B	N/A
		EPA SW-846 3051A	N/A
		EPA SW-846 7000B	N/A
Soil	AA	EPA SW-846 3050B	N/A
		EPA SW-846 3051A	N/A
		EPA SW-846 7000B	N/A

A complete listing of currently accredited ELLAP laboratories is available on the AIHA LAP, LLC website at: *http://www.aihaaccreditedlabs.org*

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 101147-0

EMSL Analytical, Inc.

Woburn, MA

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 17025:2017. 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).

2021-07-01 through 2022-06-30

Effective Dates

DEPARTMENT OF COMMERCE * UNITED STATES OF AMERICA *

For the National Voluntary Laboratory Accreditation Program

NVLAP® National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

EMSL Analytical, Inc.
5 Constitution Way, Unit A
Woburn, MA 01801
Mr. Steve Grise
Phone: 781-933-8411 Fax: 981-933-8412
Email: sgrise@emsl.com
http://www.emsl.com

ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 101147-0

Bulk Asbestos Analysis

Code	*Description*
18/A01	EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of 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

Airborne Asbestos Analysis

Code	*Description*
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

For the National Voluntary Laboratory Accreditation Program

Effective 2021-07-01 through 2022-06-30

Appendix C – Asbestos Laboratory Analytical Report and COC

EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

http://www.EMSL.com / bostonlab@emsl.com

EMSL Order:	132200769
Customer ID:	GZAG51
Customer PO:	32171
Project ID:	

Attention:	David G. Oliver	**Phone:**	(603) 232-8745
	GZA GeoEnvironmental Inc (NH)	**Fax:**	(603) 624-9463
	5 Commerce Park North	**Received Date:**	01/31/2022 8:45 AM
	Suite 201	**Analysis Date:**	02/07/2022
	Bedford, NH 03110	**Collected Date:**	01/28/2022
Project:	Jameson Store / 04.0190987.23		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
012822B-01 *132200769-0001*	Exterior - Caulk	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
012822B-01B *132200769-0002*	Exterior - Caulk	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
012822B-02 *132200769-0003*	Exterior - Glazing	Tan Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
012822B-02B *132200769-0004*	Exterior - Glazing				Positive Stop (Not Analyzed)
012822B-03 *132200769-0005*	Exterior - Paper	Red Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
012822B-03B *132200769-0006*	Exterior - Paper	Red Non-Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
012822B-03C *132200769-0007*	Exterior - Paper	Red Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
012822B-04 *132200769-0008*	Exterior - Paper	Brown/Black Fibrous Homogeneous	50% Cellulose 10% Glass	40% Non-fibrous (Other)	None Detected
012822B-04B *132200769-0009*	Exterior - Paper	Brown/Black Fibrous Homogeneous	50% Cellulose 10% Glass	40% Non-fibrous (Other)	None Detected
012822B-04C *132200769-0010*	Exterior - Paper	Brown/Black Fibrous Homogeneous	50% Cellulose 10% Glass	40% Non-fibrous (Other)	None Detected
012822B-05 *132200769-0011*	Exterior - Shingles	Gray/Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
012822B-05B *132200769-0012*	Exterior - Shingles	Black/Green Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
012822B-05C *132200769-0013*	Exterior - Shingles	Gray/Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
012822B-06 *132200769-0014*	Exterior - Felts	Black Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected
012822B-06B *132200769-0015*	Exterior - Felts	Black Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected
012822B-06C *132200769-0016*	Exterior - Felts	Black Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected

Initial report from: 02/07/2022 12:46:15

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

EMSL Order: 132200769
Customer ID: GZAG51
Customer PO: 32171
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
012822B-101 *132200769-0017*	Exterior - Shingles	Black/Green Fibrous Homogeneous	20% Glass	80% Non-fibrous (Other)	None Detected
012822B-101B *132200769-0018*	Exterior - Shingles	Black/Green Fibrous Homogeneous	20% Glass	80% Non-fibrous (Other)	None Detected
012822B-101C *132200769-0019*	Exterior - Shingles	Black/Green Fibrous Homogeneous	20% Glass	80% Non-fibrous (Other)	None Detected
012822B-201 *132200769-0020*	Exterior - Paper	Brown/Silver Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected
012822B-201B *132200769-0021*	Exterior - Paper	Brown/Silver Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected
012822B-201C *132200769-0022*	Exterior - Paper	Brown/Silver Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected
012822B-202 *132200769-0023*	Exterior - Asphalt Siding	Red/Black Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
012822B-202B *132200769-0024*	Exterior - Asphalt Siding	Red/Black Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
012822B-202C *132200769-0025*	Exterior - Asphalt Siding	Red/Black Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
012822B-203 *132200769-0026*	Exterior - Paper	Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
012822B-203B *132200769-0027*	Exterior - Paper	Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
012822B-203C *132200769-0028*	Exterior - Paper	Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
012822B-204 *132200769-0029*	Exterior - Felts	White/Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
012822B-204B *132200769-0030*	Exterior - Felts	White/Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
012822B-301 *132200769-0031*	Exterior - Paper	Red Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
012822B-301B *132200769-0032*	Exterior - Paper	Red Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
012822B-301C *132200769-0033*	Exterior - Paper	Red Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
012822B-302 *132200769-0034*	Exterior - Paper	Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
012822B-302B *132200769-0035*	Exterior - Paper	Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected

Initial report from: 02/07/2022 12:46:15

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

EMSL Order:	132200769
Customer ID:	GZAG51
Customer PO:	32171
Project ID:	

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
012822B-302C *132200769-0036*	Exterior - Paper	Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
012822B-303 *132200769-0037*	Exterior - Glazing	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
012822B-303B *132200769-0038*	Exterior - Glazing	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
012822B-304 *132200769-0039*	Exterior - Asphalt Felts	Black Fibrous Homogeneous	25% Glass	75% Non-fibrous (Other)	None Detected
012822B-304B *132200769-0040*	Exterior - Asphalt Felts	Gray/Black Fibrous Homogeneous	25% Glass	75% Non-fibrous (Other)	None Detected

Analyst(s)
John McCarthy (39)

Steve Grise, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 “Interim Method”) but augmented with procedures outlined in the 1993 (”final”) version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-139, VT AL998919, ME LB-0039

Initial report from: 02/07/2022 12:46:15

Appendix D – Lead Paint Laboratory Analytical Report

EMSL Analytical, Inc.
528 Mineola Avenue, Carle Place, NY 11514
Phone/Fax: (516) 997-7251 / (516) 997-7528
http://www.EMSL.com carleplacelab@emsl.com

EMSL Order:	062201604
CustomerID:	GZAG51
CustomerPO:	32171
ProjectID:	

Attn: **David G. Oliver**
GZA GeoEnvironmental Inc (NH)
5 Commerce Park North
Suite 201
Bedford, NH 03110

Phone:	(603) 623-3600
Fax:	(603) 624-9463
Received:	2/2/2022 10:21 AM
Collected:	1/28/2022

Project: **Jameson Store/04.0190987.23**

Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

Client Sample Description	*Lab ID*	*Collected*	*Analyzed*	*Lead Concentration*
012822 LCP-01	*062201604-0001*	1/28/2022	2/2/2022	14 % wt
	Site: Ext. Residence, Siding paint			
012822 LCP-02	*062201604-0002*	1/28/2022	2/2/2022	26 % wt
	Site: Ext. Residence, Trim paint			
012822 LCP201	*062201604-0003*	1/28/2022	2/2/2022	25 % wt
	Site: Ext. East Addition, Siding paint			
012822 LCP301	*062201604-0004*	1/28/2022	2/2/2022	29 % wt
	Site: Ext. Store, Siding paint			
012822 LCP302	*062201604-0005*	1/28/2022	2/2/2022	4.2 % wt
	Site: Ext. Store, Trim paint			

Dominique Iaccarino, Chemistry Lab Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted.
Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008% wt based on the minimum sample weight per our SOP. "<" (less than) result signifies the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. Definitions of modifications are available upon request.

Samples analyzed by EMSL Analytical, Inc. Carle Place, NY Lab ID 102344 is accredited by AIHA-LAP, LLC in the env. accreditation program for Lead in Paint, CT PH-0249, CA ELAP 2339

Initial report from 02/03/2022 08:08:46

Appendix E – PCB Laboratory Analytical Report

CERTIFICATE OF ANALYSIS

David Oliver
GZA GeoEnvironmental, Inc.
5 Commerce Park North
Bedford, NH 03110

RE: Jameson Store (04.0190987.23)
ESS Laboratory Work Order Number: 22B0090

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 2:46 pm, Feb 10, 2022

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Jameson Store

ESS Laboratory Work Order: 22B0090

SAMPLE RECEIPT

The following samples were received on February 03, 2022 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
22B0090-01	012822 PCB-01 Glazing	Solid	8082A
22B0090-02	012822 PCB-301 Glazing	Solid	8082A

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Jameson Store

ESS Laboratory Work Order: 22B0090

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Jameson Store

ESS Laboratory Work Order: 22B0090

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Jameson Store
Client Sample ID: 012822 PCB-01 Glazing
Date Sampled: 01/28/22 00:00
Percent Solids: N/A
Initial Volume: 5.75
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 22B0090
ESS Laboratory Sample ID: 22B0090-01
Sample Matrix: Solid
Units: mg/kg wet
Analyst: JLG
Prepared: 2/3/22 19:50

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.09)		8082A		1	02/04/22 15:31		DB20338
Aroclor 1221	ND (0.09)		8082A		1	02/04/22 15:31		DB20338
Aroclor 1232	ND (0.09)		8082A		1	02/04/22 15:31		DB20338
Aroclor 1242	ND (0.09)		8082A		1	02/04/22 15:31		DB20338
Aroclor 1248	ND (0.09)		8082A		1	02/04/22 15:31		DB20338
Aroclor 1254 [2C]	ND (0.09)		8082A		1	02/04/22 15:31		DB20338
Aroclor 1260	ND (0.09)		8082A		1	02/04/22 15:31		DB20338
Aroclor 1262	ND (0.09)		8082A		1	02/04/22 15:31		DB20338
Aroclor 1268	ND (0.09)		8082A		1	02/04/22 15:31		DB20338

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*57 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*65 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*54 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*66 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Jameson Store
Client Sample ID: 012822 PCB-301 Glazing
Date Sampled: 01/28/22 00:00
Percent Solids: N/A
Initial Volume: 5.3
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 22B0090
ESS Laboratory Sample ID: 22B0090-02
Sample Matrix: Solid
Units: mg/kg wet
Analyst: JLG
Prepared: 2/3/22 19:50

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.09)		8082A		1	02/04/22 15:51		DB20338
Aroclor 1221	ND (0.09)		8082A		1	02/04/22 15:51		DB20338
Aroclor 1232	ND (0.09)		8082A		1	02/04/22 15:51		DB20338
Aroclor 1242	ND (0.09)		8082A		1	02/04/22 15:51		DB20338
Aroclor 1248	ND (0.09)		8082A		1	02/04/22 15:51		DB20338
Aroclor 1254 [2C]	**1.6** (0.09)		8082A		1	02/04/22 15:51		DB20338
Aroclor 1260	ND (0.09)		8082A		1	02/04/22 15:51		DB20338
Aroclor 1262	ND (0.09)		8082A		1	02/04/22 15:51		DB20338
Aroclor 1268	ND (0.09)		8082A		1	02/04/22 15:51		DB20338

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*123 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*90 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*89 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*77 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Jameson Store

ESS Laboratory Work Order: 22B0090

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch DB20338 - 3540C										
Blank										
Aroclor 1016	ND	0.02	mg/kg wet							
Aroclor 1016 [2C]	ND	0.02	mg/kg wet							
Aroclor 1221	ND	0.02	mg/kg wet							
Aroclor 1221 [2C]	ND	0.02	mg/kg wet							
Aroclor 1232	ND	0.02	mg/kg wet							
Aroclor 1232 [2C]	ND	0.02	mg/kg wet							
Aroclor 1242	ND	0.02	mg/kg wet							
Aroclor 1242 [2C]	ND	0.02	mg/kg wet							
Aroclor 1248	ND	0.02	mg/kg wet							
Aroclor 1248 [2C]	ND	0.02	mg/kg wet							
Aroclor 1254	ND	0.02	mg/kg wet							
Aroclor 1254 [2C]	ND	0.02	mg/kg wet							
Aroclor 1260	ND	0.02	mg/kg wet							
Aroclor 1260 [2C]	ND	0.02	mg/kg wet							
Aroclor 1262	ND	0.02	mg/kg wet							
Aroclor 1262 [2C]	ND	0.02	mg/kg wet							
Aroclor 1268	ND	0.02	mg/kg wet							
Aroclor 1268 [2C]	ND	0.02	mg/kg wet							
Surrogate: Decachlorobiphenyl	*0.0224*		mg/kg wet	*0.02500*		*90*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0275*		mg/kg wet	*0.02500*		*110*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0219*		mg/kg wet	*0.02500*		*88*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0269*		mg/kg wet	*0.02500*		*107*	*30-150*			
LCS										
Aroclor 1016	0.5	0.02	mg/kg wet	0.5000		101	40-140			
Aroclor 1016 [2C]	0.4	0.02	mg/kg wet	0.5000		89	40-140			
Aroclor 1260	0.4	0.02	mg/kg wet	0.5000		85	40-140			
Aroclor 1260 [2C]	0.5	0.02	mg/kg wet	0.5000		105	40-140			
Surrogate: Decachlorobiphenyl	*0.0236*		mg/kg wet	*0.02500*		*94*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0290*		mg/kg wet	*0.02500*		*116*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0246*		mg/kg wet	*0.02500*		*98*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0276*		mg/kg wet	*0.02500*		*111*	*30-150*			
LCS Dup										
Aroclor 1016	0.5	0.02	mg/kg wet	0.5000		105	40-140	4	30	
Aroclor 1016 [2C]	0.5	0.02	mg/kg wet	0.5000		92	40-140	3	30	
Aroclor 1260	0.4	0.02	mg/kg wet	0.5000		89	40-140	4	30	
Aroclor 1260 [2C]	0.5	0.02	mg/kg wet	0.5000		109	40-140	3	30	
Surrogate: Decachlorobiphenyl	*0.0248*		mg/kg wet	*0.02500*		*99*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0302*		mg/kg wet	*0.02500*		*121*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0256*		mg/kg wet	*0.02500*		*102*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0291*		mg/kg wet	*0.02500*		*116*	*30-150*			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Jameson Store

ESS Laboratory Work Order: 22B0090

Notes and Definitions

U	Analyte included in the analysis, but not detected
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probable Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Jameson Store

ESS Laboratory Work Order: 22B0090

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Bedford, NH - GZA/KPB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 22B0090
Date Received: 2/3/2022
Project Due Date: 2/10/2022
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 2.2 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / (No)
    Who was contacted? Date: Time: By:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	254957	Yes	N/A	Yes	Plastic Baggie	NP	
2	254958	Yes	N/A	Yes	Plastic Baggie	NP	

2nd Review
Were all containers scanned into storage/lab? Initials KL
Are barcode labels on correct containers? (Yes) / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / (NA)
Are all Hex Chrome stickers attached? Yes / No / (NA)
Are all QC stickers attached? Yes / No / (NA)
Are VOA stickers attached if bubbles noted? Yes / No / (NA)

Completed By: KL Date & Time: 2.3.22 1721
Reviewed By: [signature] Date & Time: 2/5/22 1724

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS LAB PROJECT ID: 22B0090

Turn Time: ✓ Standard Rush ____ Approved By: ____

Reporting Limits - 0.1

State where samples were collected: MA RI CT **NH** NJ NY ME Other ____

Is this project for any of the following: (please circle)
MA-MCP CT-RCP RGP NJ-DKQP Other ____

Electonic Deliverable Yes X No ____
Format: Excel ____ Access ____ PDF X Other ____

Client Contact: David Oliver / david.oliver@gza.com
Client Address: GZA GeoEnvironmental Inc.
5 Commerce Park, Suite 201
Bedford, NH 03110
603-232-8745

Project # 04.0190987.23
Project Name: Jameson Store

ESS Lab Sample ID	Date	Collection Time	Grab -G Composite-C	Matrix	Sample Identification	# of Containers	Analysis: 9082A PCBs *									Comment #
1	1/28/22		C	SD	012822 PCB-01 / Glazing	1	X									
2	1/28/22		C	SD	012822 PCB-301 / Glazing	1	X									

Preservation Code: 1-NP, 2-HCl, 3-H2SO4, 4-HNO3, 5-NaOH, 6-MeOH, 7-Asorbic Acid, 8-ZnAct, 9-____ — 1
Container Type: P-Poly G-Glass AG-Amber Glass S-Sterile V-VOA — P
Matrix: S-Soil SD-Solid D-Sludge WW-Wastewater GW-Groundwater SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filter

Cooler Present ____ Yes ____ No
Seals Intact ____ Yes ____ No NA: ____
Cooler Temperature: 2.2 ice

Sampled by: Andrew Pomeroy
Comments: * Manual Soxhlet

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	1/28/22 @1630	CUSTODY SEAL / GZA Fridge	Custody Seal	2/3/22 10:45	
	2/3/22 1640				

Please E-mail all changes to Chain of Custody in writing.

Page 1 of 1

Appendix F - Photolog

Photographic Log

Client Name:	Site Location:	Project No.
New Hampshire Department of Environmental Services	354 NH Route 25, Warren, NH	04.0190987.23

Photo No. 1. View of the Site building looking east.

Photo No. 2. View of the Site building looking north.

Photographic Log

Client Name:	Site Location:	Project No.
New Hampshire Department of Environmental Services	354 NH Route 25, Warren, NH	04.0190987.23

Photo No. 3. Vent and fill pipes located along the southern side of the Site building.

Photo No. 4. View of the Site building looking southeast.

Photographic Log

Client Name:	Site Location:	Project No.
New Hampshire Department of Environmental Services	354 NH Route 25, Warren, NH	04.0190987.23

Photo No. 5. View of the Site building looking northwest.

Photo No. 6. View of the Site building looking west.

Photographic Log

Client Name:	Site Location:	Project No.
New Hampshire Department of Environmental Services	354 NH Route 25, Warren, NH	04.0190987.23

Photo No. 7. Exterior opening to the Site basement.

Photo No. 8. Approximate one-gallon of petroleum-like liquid observed within the basement.

Photographic Log

Client Name:	Site Location:	Project No.
New Hampshire Department of Environmental Services	354 NH Route 25, Warren, NH	04.0190987.23

Photo No. 9. Two approximately 275-gallon heating oil ASTs located within the basements.

Photo No. 10. Staining observed on the apparent earthen floor beneath the ASTs.

Photographic Log

Client Name:	Site Location:	Project No.
New Hampshire Department of Environmental Services	354 NH Route 25, Warren, NH	04.0190987.23

Photo No. 11. View of a dug well located to the east of the Site building.

Photo No. 12. View of Baker River adjoining the Site to the east.

Photographic Log

Client Name:	Site Location:	Project No.
New Hampshire Department of Environmental Services	354 NH Route 25, Warren, NH	04.0190987.23

Photo No. 13. Construction debris of an apparent former shed structure observed to the north of the main building.

Photo No. 14. View of the solid waste dumping and apparent construction debris from a former shed.

Photographic Log

Client Name:	Site Location:	Project No.
New Hampshire Department of Environmental Services	354 NH Route 25, Warren, NH	04.0190987.23

Photo No. 15. Miscellaneous solid waste debris observed to the north, east, and south of the Site building.

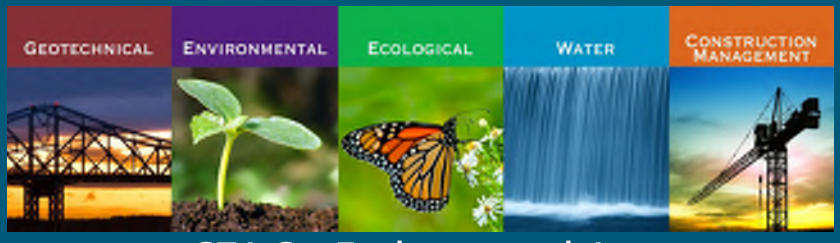
Photo No. 16. Construction debris from the former shed.

Photographic Log

Client Name:	Site Location:	Project No.
New Hampshire Department of Environmental Services	354 NH Route 25, Warren, NH	04.0190987.23

Photo No. 17. Portion of the drum label referencing the American Refining Group.

Photo No. 18. Debris observed partially buried along the northern side of the Site building.

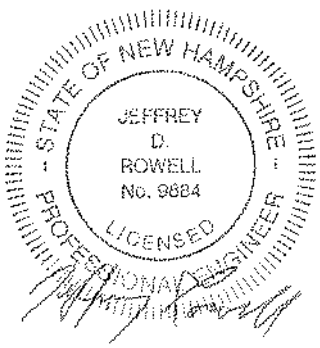


GZA GeoEnvironmental, Inc.

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

Asbestos and Hazardous Building Materials Survey
Addendum No.1-
Asbestos and LCP Laboratory Chain of Custody Sheets
Old Jameson Store
354 NH Route 25
Warren, NH
NHDES Site #: 202111041
Project Type: SITEEVALHW
Project Number: 40376

Prepared For:
New Hampshire Department of Environmental Services
Brownfields Program
Hazardous Waste Remediation Bureau
29 Hazen Drive, PO Box 95
Concord, New Hampshire 03302-0095
Phone Number (603) 271-1169
RP Contact Name: Ms. Melinda Bubier
RP Contact Email: melinda.s.bubier@des.nh.gov



Prepared By:
GZA GeoEnvironmental, Inc.
5 Commerce Park North, Suite 201
Bedford, NH 03110
Contact Name: Jeffrey Rowell, P.E.
Contact Email: jeffrey.rowell@gza.com

Date of Addendum: August 3, 2023

OrderID: 132200769

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

132200769

EMSL Analytical, Inc.
5 Constitution Way, Unit A
Woburn, MA, 01801
PHONE: (781) 933-8411
EMAIL: Boslonlab@EMSL.com

If Bill-To is the same as Report-To leave this section blank. Third-party billing requires written authorization.

Customer Information		Billing Information	
Customer ID:	GZAG51	Billing ID:	
Company Name:	GZA	Company Name:	
Contact Name:	David Oliver	Billing Contact:	
Street Address:	5 Commerce Park North, Suite 201	Street Address:	
City, State, Zip:	Bedford, NH 03110	City, State, Zip:	
Country:	US	Country:	
Phone:	(603) 315-4999	Phone:	
Email(s) for Report:	david.oliver@gza.com	Email(s) for Invoice:	

Project Information

Project Name/No: Jameson Store / 04.0190987.23
Purchase Order: 32171

EMSL LIMS Project ID: (If applicable, EMSL will provide)

US State where samples collected: NH

State of Connecticut (CT) must select project location: ☐ Commercial (Taxable) ☐ Residential (Non-Taxable)

Sampled By Name: Andrew Pomeroy
Sampled By Signature:
No. of Samples in Shipment: 40

Turn-Around-Time (TAT)

☐ 3 Hour ☐ 4-4.5 Hour ☐ 6 Hour ☐ 24 Hour ☐ 32 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☑ 1 Week ☐ 2 Week

*TEM Air 3-6 Hour, please call ahead to schedule. 32 Hour TAT available for select tests only; samples must be submitted by 11:30 am.

Test Selection

PCM Air
- ☐ NIOSH 7400
- ☐ NIOSH 7400 w/ 8hr. TWA

PLM - Bulk (reporting limit)
- ☑ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)
- ☐ POINT COUNT
  - ☐ 400 (<0.25%) ☐ 1,000 (<0.1%)
- POINT COUNT w/ GRAVIMETRIC
  - ☐ 400 (<0.25%) ☐ 1,000 (<0.1%)
- ☐ NIOSH 9002 (<1%)
- ☐ NYS 198.1 (Friable - NY)
- ☐ NYS 198.6 NOB (Non-Friable - NY)
- ☐ NYS 198.8 (Vermiculite SM-V)

TEM - Air
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312*

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (Non-Friable-NY)
- ☐ TEM EPA 600/R-93/116 w Milling Prep (0.1%)

Other Test (please specify)

TEM - Settled Dust
- ☐ Microvac - ASTM D5755
- ☐ Wipe - ASTM D6480
- ☐ Qualitative via Filtration Prep
- ☐ Qualitative via Drop Mount Prep

Soil - Rock - Vermiculite (reporting limit)*
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM Qualitative via Filtration Prep
- ☐ TEM Qualitative via Drop Mount Prep

*Please call with your project-specific requirements.

☑ Positive Stop - Clearly Identified Homogeneous Areas (HA) | Filter Pore Size (Air Samples) ☐ 0.8um ☐ 0.45um

Sample Number	Sample Location / Description	Volume, Area or Homogeneous Area	Date / Time Sampled (Air Monitoring Only)
012822B-01	Exterior / Caulk	01	
01B	/		
02	/ Glazing	02	
02B	/		
03	/ Paper	03	
03B	/		
03C	/		
04	/ Paper	04	

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

REC'D Sga 0845
EMSL BOSTON JAN 31 2022

Method of Shipment: UPS		Sample Condition Upon Receipt: UPS 1Z 093 867 22 1012 9869	
Relinquished by:	Date/Time: 1/28/22 @ 1630	Received by:	Date/Time
Relinquished by:	Date/Time:	Received by:	Date/Time

Controlled Document - COC-05 Asbestos R15 4/23/2021

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

Page 1 of 3

OrderID: 132200769

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

132200769

EMSL Analytical, Inc.
5 Constitution Way, Unit A
Woburn, MA, 01801

PHONE: (781) 933-8411
EMAIL: Bostonlab@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample Number	Sample Location / Description	Volume, Area or Homogeneous Area	Date / Time Sampled (Air Monitoring Only)
012822B-04B	Exterior / Paper	04	
04C	/		
05	/ Shingles	05	
05B	/		
05C	/		
06	/ Felts	06	
06B	/		
06C	/		
012822B-101	/ Shingles	101	
101B	/		
101C	/		
012822B-201	/ Paper	201	
201B	/		
201C	/		
202	/ Asphalt Siding	202	
202B	/		
202C	/		
203	/ Paper	203	
203B	/		
203C	/		
204	/ Felts	204	
204B	/		
012822B-301	/ Paper	301	
301B	/		
301C	/		

Method of Shipment: UPS		Sample Condition Upon Receipt:	
Relinquished by:	Date/Time: 1/28/22 @ 1630	Received by:	Date/Time
Relinquished by:	Date/Time:	Received by:	Date/Time

Controlled Document - COC-05 Asbestos R15 4-23-2021

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Page 2 of 3

REC'D Spa 0845
EMSL-BOSTON JAN 31 2022

OrderID: 132200769

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

132200769

EMSL Analytical, Inc.
5 Constitution Way, Unit A
Woburn, MA, 01801

PHONE: (781) 933-8411
EMAIL: Bostonlab@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample Number	Sample Location / Description	Volume, Area or Homogeneous Area	Date / Time Sampled (Air Monitoring Only)
012822B-302	Exterior / Paper	302	
302B	/		
302C	/		
303	/ Glazing	303	
303B	/		
304	/ Asphalt, Felts	304	
304B	/		

Method of Shipment: VPS		Sample Condition Upon Receipt:	
Relinquished by:	Date/Time: 1/28/22 @ 1630	Received by:	Date/Time
Relinquished by:	Date/Time:	Received by:	Date/Time

Controlled Document - COC-05 Asbestos R15 4/23/2021

☐ **AGREE TO ELECTRONIC SIGNATURE** (By checking, I consent to signing this Chain of Custody document by electronic signature.)

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REC'D SB 0845
EMSL-BOSTON JAN 31 2022

Page 3 of 3

OrderID: 062201604

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Lead Chain of Custody

EMSL Order Number / Lab Use Only: 062201604

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: CinnaminsonLeadLab@emsl.com

Customer Information		Billing Information	
Customer ID:	GZAG51	Billing ID:	
Company Name:	GZA GeoEnvironmental, Inc.	Company Name:	
Contact Name:	David Oliver	Billing Contact:	
Street Address:	5 Commerce Park North Suite 201	Street Address:	
City, State, Zip:	Bedford, NH 03110	Country: USA	City, State, Zip: / Country:
Phone:	603-232-8745		Phone:
Email(s) for Report:	david.oliver@gza.com		Email(s) for Invoice:

Project Information

Project Name/No: Jameson Store / 04.0190987.23
Purchase Order: 32171
EMSL LIMS Project ID. (If applicable, EMSL will provide)
US State where samples collected: NH
State of Connecticut (CT) must select project location: ☐ Commercial (Taxable) ☐ Residential (Non-Taxable)
Sampled By Name: Andrew Pomeroy
Sampled By Signature:
No. of Samples in Shipment

RECEIVED EMSL ANALYTICAL INC 22 FEB 15 AM 10:

Turn-Around-Time (TAT)

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 32 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☑ 1 Week ☐ 2 Week

Please call ahead for large projects and/or turnaround times 6 Hours or Less. *32 Hour TAT available for select tests only; samples must be submitted by 11:30am.

MATRIX	METHOD	INSTRUMENT	REPORTING LIMIT	SELECTION
CHIPS ☑ % by wt. ☐ ppm (mg/kg) ☐ mg/cm²	SW 846-7000B	Flame Atomic Absorption	0.008% (80ppm)	☑ DI
*Reporting Limit based on a minimum 0.25g sample weight	SW 846-6010D*	ICP-OES	0.0004% (4ppm)	☐ Cm
AIR	NIOSH 7082	Flame Atomic Absorption	4µg/filter	☐
	NIOSH 7300M / NIOSH 7303M	ICP-OES	0.5µg/filter	☐
	NIOSH 7300M / NIOSH 7303M	ICP-MS	0.05µg/filter	☐
WIPE ☐ ASTM ☐ NON-ASTM	SW 846-7000B	Flame Atomic Absorption	10µg/wipe	☐
*If no box is checked, non-ASTM Wipe is assumed	SW 846-6010D*	ICP-OES	1.0µg/wipe	☐
TCLP	SW 846-1311 / 7000B / SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	SW 846-1311 / SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)	☐
SPLP	SW 846-1312 / 7000B / SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	SW 846-1312 / SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)	☐
TTLC	22 CCR App II, 7000B	Flame Atomic Absorption	40mg/kg (ppm)	☐
	22 CCR App. II, SW 846-6010D*	ICP-OES	2mg/kg (ppm)	☐
STLC	22 CCR App. II, 7000B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	22 CCR App. II, SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)	☐
Soil	SW 846-7000B	Flame Atomic Absorption	40mg/kg (ppm)	☐
	SW 846-6010D*	ICP-OES	2mg/kg (ppm)	☐
Wastewater Unpreserved ☐ Preserved with HNO3 ☐ PH<2	SM 3111B / SW 846-7000B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	EPA 200.7	ICP-OES 2/2/22	0.020 mg/L (ppm)	☐
Drinking Water Unpreserved ☐ Preserved with HNO3 ☐ PH<2	EPA 200.5	ICP-OES	0.003 mg/L (ppm)	☐
	EPA 200.8	ICP-MS	0.001 mg/L (ppm)	☐
TSP/SPM Filter	40 CFR Part 50	ICP-OES	12 µg/filter	☐
Other:				☐

Sample Number	Sample Location	Volume / Area	Date / Time Sampled
012822 LCP-01	Ext. Residence, Siding paint	2 Square Inches	1/28/22
012822 LCP-02	Ext. Residence, Trim paint	2 Square Inches	1/28/22
012822 LCP-201	Ext. East Addition, Siding paint	2 Square Inches	1/28/22
012822 LCP-301	Ext. Store, Siding paint	2 Square Inches	1/28/22
012822 LCP-302	Ext. Store, Trim paint	2 Square Inches	1/28/22

Method of Shipment: UPS
Sample Condition Upon Receipt

Relinquished by:	Date/Time: 1/28/22 @1630	Received by:	Date/Time: 2/2/22 @ 10:21 AM FedEx
Relinquished by:	Date/Time:	Received by:	Date/Time

Controlled Document - COC-25 Lead R16 4/19/2021

*6010C Available Upon Request

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

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REC'D Sep 0845
EMSL-BOSTON JAN 31 2022

Page 1 of 1

13 867 22 1012 0869

Weston & Sampson
55 Walkers Brook Drive, Reading, MA 01867 (HQ)
Tel: 978.532.1900

December 5, 2024

Michael McCluskey, P.E.
New Hampshire Department of Environmental Services
Brownfields Program | Hazardous Waste Remediation Bureau
29 Hazen Drive, P.O. Box 95
Concord, New Hampshire 03302-0095

RE: Report of Hazardous Building Materials Investigation
350 Route 25
Warren, New Hampshire

Dear Mr. McCluskey:

INTRODUCTION

Weston & Sampson Engineers, Inc. (Weston & Sampson) is pleased to present this report of our Hazardous Building Materials Investigation (HBMI) conducted for the buildings located at 350 Route 25 in Warren, New Hampshire (Site). Our services were completed in coordination with our agreement. In response to the proposed demolition of the site, Weston & Sampson performed a survey to identify/verify the presence of asbestos-containing materials (ACMs), lead paint/coatings, and other hazardous materials (OHMs).

The Site building is a two-story single-family home plus basement with a stone foundation and an approximate footprint of 2,000 SF. A two bay wooden shed with a steel roof lies south of the home with an approximate footprint of 1,000 SF.

SURVEY RESULTS

Asbestos Survey

The asbestos survey was performed by accredited asbestos inspector Mr. Caleb Pettigrew on October 10th, 2024. A total of 81 samples of suspect asbestos-containing materials were collected from 37 homogenous materials. We performed the bulk sampling in the subject area according to methods outlined in the U.S. Environmental Protection Agency (EPA) guidance document titled, "Guidance for Controlling Asbestos-Containing Materials in Buildings" (Document No. 560/5-85/024). Samples were analyzed by EMSL Analytical, Inc. in Woburn, Massachusetts. The results of the sampling are summarized below.

Asbestos Sample Results

Client ID	Description	Location	Analytical Result (% Asbestos)
01A-B	**Grey caulk under window**	**Exterior**	**2% Chrysotile**
02A-B	White caulk on siding	Exterior	NAD
03A-B	White caulk around door	Exterior	NAD
04A-B	Black roof paper	Shed exterior	NAD
05A-B	White caulk on window	Shed exterior	NAD
06A-B	Caulk at base of siding	Exterior	NAD
07A-B	Front door white glazing	Exterior	NAD
08A-B	Sheetrock	Interior-Second floor	NAD
09A-B	Joint compound	Interior-Second floor	NAD

10A-B	Pegboard	Interior-First floor	NAD
11A-B	Kitchen wall tile grout	Interior-First floor	NAD
12A-B	Floral self-stick floor tile	Interior-First floor	NAD
13A-B	Bathroom wall tile grout	Interior-First floor	NAD
14A-B	Bathroom wall tile adhesive	Interior-First floor	NAD
15A-B	Kitchen wall tile adhesive	Interior-First floor	NAD
16A-C	Wall plaster skim coat	Basement	NAD
17A-C	Wall plaster rough coat	Basement	NAD
18A-C	White HVAC sealant	Basement	NAD
19A-B	Black construction paper	Exterior	NAD
20A-B	Red construction paper	Basement	NAD
21A-C	Chimney plaster skim coat	Interior-First floor	NAD
22A-C	Chimney plaster rough coat	Interior-First floor	NAD
23A-B	**White siding**	**Exterior**	**18% Chrysotile**
24A-B	Roof paper	Exterior	NAD
25A-B	Grey window caulk on steel frame over original windows	Exterior	NAD
26A-B	**Red window glazing**	**Exterior**	**2% Chrysotile**
27A-B	**Black window glazing**	**Exterior**	**2% Chrysotile**
28A-B	Kitchen self stick tile	Interior-First floor	NAD
29A-B	Kitchen felt paper under tile	Interior-First floor	NAD
30A-B	Sheetrock	Interior-First floor	NAD
31A-B	Joint compound	Interior-First floor	NAD
32A-B	First layer of wallpaper	Interior-First floor	NAD
33A-B	Second layer of wallpaper	Interior-First floor	NAD
34A-B	Wallpaper adhesive	Interior-First floor	NAD
35A-C	Ceiling plaster skim coat	Interior-First floor	NAD
36A-C	Ceiling plaster rough coat	Interior-First floor	NAD
37A-B	Kitchen wallpaper adhesive	Interior-First floor	NAD

NAD=no asbestos detected

The EPA and New Hampshire Department of Environmental Services (DES), consider materials identified to contain greater than 1% asbestos to be ACMs. As shown in the table above, four of the building materials sampled by Weston & Sampson contained asbestos exceeding 1%. According to DES regulations, regulated ACMs must be removed by a licensed contractor prior to any activity that would disturb the material. All asbestos-containing materials were observed to be non-friable and be in generally good condition at the time of the survey.

The following is a summary of ACMs identified during the Weston & Sampson HBMI:

Material	Location	Approximate Quantity
Grey caulk under window	Exterior	250 LF
White siding	Exterior	5,500 SF

Material	Location	Approximate Quantity
Red window glazing	Exterior	250 SF
Black window glazing	Exterior	250 SF

Asbestos Limitations

Aside from the damp proofing, our survey did not include an evaluation of soils or underground materials that may be present at the Site. Limited exploratory demolition was performed to access potentially hidden materials. Other suspect ACMs may be present at the Site or within other building areas that may not have been accessible by Weston & Sampson during our sampling. Weston & Sampson recommends that if any suspect materials are uncovered during demolition or renovation activities that were not identified during the survey, that the materials be sampled and analyzed for asbestos content prior to disturbance. This document is not intended to be nor will it suffice to serve as a bid document or specification.

Lead Sampling

As part of the HMBI, Weston & Sampson performed a lead paint screening of the Site building. During the screening, we collected five (5) paint chip samples from representative painted/coated building components for analysis via Atomic Absorption Spectrometry using method SW846-7420. Samples were analyzed by EMSL Analytical, Inc. of Indianapolis, Indiana.

The paint screening revealed that all of the paint chip samples collected from the Site building contained levels of lead paint greater than the EPA residential standard of 0.50% lead by weight. However, the Occupational Health and Safety Administration (OSHA) Lead in Construction Standard 29 CFR 1926.62 considers *any* detectable level of lead to be a potential for exposure if dust is generated from disturbances of surfaces coated with paint containing lead.

Lead Sample Results

Sample ID	Description	Location	Analytical Result (% wt)
L1	White paint	Exterior	2.9 %
L2	Black shutter paint	Exterior	3.2 %
L3	Red paint	Exterior	2.5 %
L4	White interior paint	Interior-First floor	2.5 %
L5	White paint behind siding	Exterior	4.3 %

Regulatory Implications and Regulations

OSHA defines any detectable concentration of lead in paint as a potential lead exposure hazard to workers doing construction/demolition-type work on these surfaces as even small concentrations of lead can result in unacceptable employee exposures depending upon the method of removal and other workplace conditions. Since these conditions can vary greatly, the lead-in-construction standard was written to require exposure monitoring or the use of historical or objective data to ensure that employee exposures do not exceed the

Action Level of 30 micrograms per cubic meter of air (µg/m3). Historical data may be applied to some construction tasks involving lead.

OSHA requires that if coated surfaces with paint containing lead are impacted during demolition, then lead exposure monitoring must be performed by the contractor. Contractors and employers of staff who may disturb these materials are obligated to perform a 'negative exposure assessment' in accordance with OSHA regulations in order to document that, although minimal levels of lead are present in these materials, exposure to lead does not exceed the aforementioned OSHA Action Level.

OSHA states that until the employer performs an exposure assessment (or can supply prior data regarding the same type of work which may exempt them from the standard) and documents that employees are not exposed above the permissible exposure limit (PEL) of greater than 50 µg/m3 of air, the employer must treat employees as if they were exposed above the PEL for the following operations:

- manual demolition of structures, manual scraping, manual sanding, and use of heat gun where lead-containing coatings or paints are present;
- abrasive blasting enclosure movement and removal;
- power tool cleaning;
- lead burning;
- using lead-containing mortar or spray painting with lead-containing paint;
- abrasive blasting, rivet busting, or welding, cutting, or burning on any structure where lead-containing coatings or paint are present;
- cleanup activities where dry expendable abrasive are used; and
- any other task the employer believes may cause exposure in excess of the PEL.

The contractor must provide respiratory protection, protective work clothing and equipment, change areas, hand washing facilities, biological monitoring, and training until an exposure assessment has determined that the work activity will result in an exposure below the PEL. Additional requirements under this standard include a written compliance program as well as record keeping.

Other Hazardous Materials

As part of the survey, Weston & Sampson performed a survey/inventory of potentially hazardous chemicals and mechanical equipment located within the survey areas that will require special handling and disposal prior to building renovation / demolition activities. The following hazardous materials were observed in the HBMI area:

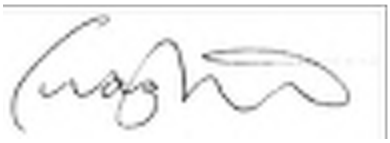
Material	Quantity
Paint can (1/2 Gal)	50
Household cleaning supplies (32 oz)	50
Fuel canister (gasoline, Kerosene) (1 Gal)	5
Propane tank (5 gal)	3
Home propane tank (120 Gal)	1

4’ Fluorescent bulb	10
Compressed canister (16 oz)	50
Fire extinguisher	5
Tires	15
E-scrap/car parts	Numerous pieces observed throughout the property

We appreciate the opportunity to assist you with this project. If you have any questions or require any additional information, please do not hesitate to contact us at (978) 532-1900.

Very truly yours,

WESTON & SAMPSON ENGINEERS, INC.



Craig Miner, LEED AP
Team Leader

Caleb Pettigrew
Environmental Scientist III

Attachments:

Laboratory Analytical results

EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

http://www.EMSL.com / bostonlab@emsl.com

EMSL Order:	132406280
Customer ID:	WESA62
Customer PO:	
Project ID:	

Attention:	Craig Miner	**Phone:**	(978) 532-1900
	Weston & Sampson Engineers, Inc.	**Fax:**	(978) 977-0100
	55 Walkers Brook Drive	**Received Date:**	10/11/2024 8:30 AM
	Suite 100v	**Analysis Date:**	10/17/2024 - 10/18/2024
	Reading, MA 01867	**Collected Date:**	10/10/2024
Project:	350 Route 25 Warren, NH		

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
01A *132406280-0001*	Exterior - Gray Caulk under Window	Gray/White/Beige Non-Fibrous Homogeneous		98% Non-fibrous (Other)	**2% Chrysotile**
01B *132406280-0002*	Exterior - Gray Caulk under Window				**Positive Stop (Not Analyzed)**
02A *132406280-0003*	Exterior - White Caulk on Siding	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
02B *132406280-0004*	Exterior - White Caulk on Siding	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
03A *132406280-0005*	Exterior - White Caulk around Door	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
03B *132406280-0006*	Exterior - White Caulk around Door	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
04A *132406280-0007*	Shed Exterior - Black Roof Paper	Black Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected
04B *132406280-0008*	Shed Exterior - Black Roof Paper	Black Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected
05A *132406280-0009*	Shed Exterior - White Caulk on Window	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
05B *132406280-0010*	Shed Exterior - White Caulk on Window	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
06A *132406280-0011*	Exterior - Caulk at Base of Siding	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
06B *132406280-0012*	Exterior - Caulk at Base of Siding	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
07A *132406280-0013*	Exterior - Front Door White Glazing	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
07B *132406280-0014*	Exterior - Front Door White Glazing	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
08A *132406280-0015*	Interior - Second Floor - Sheetrock	Brown/Gray Non-Fibrous Homogeneous	12% Cellulose 1% Glass	87% Non-fibrous (Other)	None Detected
08B *132406280-0016*	Interior - Second Floor - Sheetrock	Brown/Gray Non-Fibrous Homogeneous	12% Cellulose 1% Glass	87% Non-fibrous (Other)	None Detected

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

EMSL Order:	132406280
Customer ID:	WESA62
Customer PO:	
Project ID:	

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
09A *132406280-0017*	Interior - Second Floor - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
09B *132406280-0018*	Interior - Second Floor - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
10A *132406280-0019*	Interior - First Floor - Pegboard	Brown Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
10B *132406280-0020*	Interior - First Floor - Pegboard	Brown Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
11A *132406280-0021*	Interior - First Floor - Kitchen Wall Tile Grout	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
11B *132406280-0022*	Interior - First Floor - Kitchen Wall Tile Grout	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12A *132406280-0023*	Interior - First Floor - Floral Self-Stick Floor Tile	Brown/Black Non-Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
12B *132406280-0024*	Interior - First Floor - Floral Self-Stick Floor Tile	Brown/Black Non-Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
13A *132406280-0025*	Interior - First Floor - Bathroom Wall Tile Grout	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13B *132406280-0026*	Interior - First Floor - Bathroom Wall Tile Grout	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14A *132406280-0027*	Interior - First Floor - Bathroom Wall Tile Adhesive	Gray/White/Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14B *132406280-0028*	Interior - First Floor - Bathroom Wall Tile Adhesive	Gray/White/Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
15A *132406280-0029*	Interior - First Floor - Kitchen Wall Tile Adhesive	White/Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
15B *132406280-0030*	Interior - First Floor - Kitchen Wall Tile Adhesive	White/Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
16A *132406280-0031*	Basement - Wall Plaster Skim Coat	Gray/White Non-Fibrous Homogeneous	2% Hair	98% Non-fibrous (Other)	None Detected
16B *132406280-0032*	Basement - Wall Plaster Skim Coat	Gray/White Non-Fibrous Homogeneous	2% Hair	98% Non-fibrous (Other)	None Detected
16C *132406280-0033*	Basement - Wall Plaster Skim Coat	Gray/White Non-Fibrous Homogeneous	2% Hair	98% Non-fibrous (Other)	None Detected
17A *132406280-0034*	Basement - Wall Plaster Rough Coat	Gray/White Non-Fibrous Homogeneous	2% Hair	98% Non-fibrous (Other)	None Detected
17B *132406280-0035*	Basement - Wall Plaster Rough Coat	Gray/White Non-Fibrous Homogeneous	2% Hair	98% Non-fibrous (Other)	None Detected

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EMSL Order: 132406280
Customer ID: WESA62
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
17C *132406280-0036*	Basement - Wall Plaster Rough Coat	Gray/White Non-Fibrous Homogeneous	2% Hair	98% Non-fibrous (Other)	None Detected
18A *132406280-0037*	Basement - White HVAC Sealant	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
18B *132406280-0038*	Basement - White HVAC Sealant	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
18C *132406280-0039*	Basement - White HVAC Sealant	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
19A *132406280-0040*	Exterior - Black Construction Paper	Black Non-Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (Other)	None Detected
19B *132406280-0041*	Exterior - Black Construction Paper	Black Non-Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (Other)	None Detected
20A *132406280-0042*	Basement - Red Construction Paper	Various/Black Non-Fibrous Homogeneous	35% Cellulose	65% Non-fibrous (Other)	None Detected
20B *132406280-0043*	Basement - Red Construction Paper	Various/Black Non-Fibrous Homogeneous	35% Cellulose	65% Non-fibrous (Other)	None Detected
21A *132406280-0044*	Interior - First Floor - Chimney Plaster Skim Coat	White Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
21B *132406280-0045*	Interior - First Floor - Chimney Plaster Skim Coat	White Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
21C *132406280-0046*	Interior - First Floor - Chimney Plaster Skim Coat	White Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
22A *132406280-0047*	Interior - First Floor - Chimney Plaster Rough Coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
22B *132406280-0048*	Interior - First Floor - Chimney Plaster Rough Coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
22C *132406280-0049*	Interior - First Floor - Chimney Plaster Rough Coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
23A *132406280-0050*	Exterior - White Siding	Gray Non-Fibrous Homogeneous		82% Non-fibrous (Other)	**18% Chrysotile**
23B *132406280-0051*	Exterior - White Siding				**Positive Stop (Not Analyzed)**
24A *132406280-0052*	Exterior - Roof Paper	Black Non-Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (Other)	None Detected
24B *132406280-0053*	Exterior - Roof Paper	Black Non-Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (Other)	None Detected
25A *132406280-0054*	Exterior - Gray Window Caulk on Steel Frame over Original Windows	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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EMSL Order: 132406280
Customer ID: WESA62
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
25B *132406280-0055*	Exterior - Gray Window Caulk on Steel Frame over Original Windows	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
26A *132406280-0056*	Exterior - Red Window Glazing	Gray/Tan Non-Fibrous Homogeneous		98% Non-fibrous (Other)	**2% Chrysotile**
26B *132406280-0057*	Exterior - Red Window Glazing				**Positive Stop (Not Analyzed)**
27A *132406280-0058*	Exterior - Black Window Glazing	Gray/Tan Non-Fibrous Homogeneous		98% Non-fibrous (Other)	**2% Chrysotile**
27B *132406280-0059*	Exterior - Black Window Glazing				**Positive Stop (Not Analyzed)**
28A *132406280-0060*	Interior - First Floor - Kitchen Self-Stick Tile	Gray/Beige Non-Fibrous Homogeneous	25% Cellulose 2% Glass	73% Non-fibrous (Other)	None Detected
28B *132406280-0061*	Interior - First Floor - Kitchen Self-Stick Tile	Gray/Beige Non-Fibrous Homogeneous	25% Cellulose 2% Glass	73% Non-fibrous (Other)	None Detected
29A *132406280-0062*	Interior - First Floor - Kitchen Felt Paper under Tile	Gray/White/Beige Fibrous Homogeneous	90% Cellulose 3% Glass	7% Non-fibrous (Other)	None Detected
29B *132406280-0063*	Interior - First Floor - Kitchen Felt Paper under Tile	Gray/White/Beige Fibrous Homogeneous	90% Cellulose 3% Glass	7% Non-fibrous (Other)	None Detected
30A *132406280-0064*	Interior - First Floor - Sheetrock	Brown/Gray Non-Fibrous Homogeneous	3% Cellulose 1% Glass	96% Non-fibrous (Other)	None Detected
30B *132406280-0065*	Interior - First Floor - Sheetrock	Brown/Gray Non-Fibrous Homogeneous	3% Cellulose 1% Glass	96% Non-fibrous (Other)	None Detected
31A *132406280-0066*	Interior - First Floor - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
31B *132406280-0067*	Interior - First Floor - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
32A *132406280-0068*	Interior - First Floor - First Layer of Wallpaper	Brown/Beige Fibrous Homogeneous	85% Cellulose	15% Non-fibrous (Other)	None Detected
32B *132406280-0069*	Interior - First Floor - First Layer of Wallpaper	Brown/Beige Fibrous Homogeneous	85% Cellulose	15% Non-fibrous (Other)	None Detected
33A *132406280-0070*	Interior - First Floor - Second Layer of Wallpaper	Brown/Tan/Beige Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
33B *132406280-0071*	Interior - First Floor - Second Layer of Wallpaper	Brown/Tan/Beige Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
34A *132406280-0072*	Interior - First Floor - Wallpaper Adhesive	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
34B *132406280-0073*	Interior - First Floor - Wallpaper Adhesive	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 10/18/2024 08:16:58

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Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
35A *132406280-0074*	Interior - First Floor - Ceiling Plaster Skim Coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
35B *132406280-0075*	Interior - First Floor - Ceiling Plaster Skim Coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
35C *132406280-0076*	Interior - First Floor - Ceiling Plaster Skim Coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
36A *132406280-0077*	Interior - First Floor - Ceiling Plaster Rough Coat	Gray Non-Fibrous Homogeneous	2% Hair	98% Non-fibrous (Other)	None Detected
36B *132406280-0078*	Interior - First Floor - Ceiling Plaster Rough Coat	Gray Non-Fibrous Homogeneous	2% Hair	98% Non-fibrous (Other)	None Detected
36C *132406280-0079*	Interior - First Floor - Ceiling Plaster Rough Coat	Gray Non-Fibrous Homogeneous	2% Hair	98% Non-fibrous (Other)	None Detected
37A *132406280-0080*	Interior - First Floor - Kitchen Wallpaper Adhesive	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
37B *132406280-0081*	Interior - First Floor - Kitchen Wallpaper Adhesive	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Analyst(s)
Ava Kopellas (77)

Steve Grise, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 “Interim Method”) but augmented with procedures outlined in the 1993 (”final”) version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-139, VT AL998919, ME LB-0039

Initial report from: 10/18/2024 08:16:58

OrderID: 132406280

EMSL ANALYTICAL, INC.
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Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

132406280

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
PHONE: (800) 220-3675
EMAIL: CinnAsblab@EMSL.com

Customer Information		Billing Information	
Customer ID:		Billing ID:	
Company Name:	Weston & Sampson	Company Name:	
Contact Name:	Craig Miner	Billing Contact:	
Street Address:	55 Walkers Brook Drive	Street Address:	
City, State, Zip:	Reading, MA 01867	City, State, Zip:	
Country:	USA	Country:	
Phone:	1-800-SAMPSON	Phone:	
Email(s) for Report:	minerc@wseinc.com, Pettigrew.Caleb@wseinc.com	Email(s) for Invoice:	

Project Information

Project Name/No: 350 Rte 25 Warren
Purchase Order:
EMSL LIMS Project ID: (If applicable, EMSL will provide)
US State where samples collected: NH
State of Connecticut (CT) must select project location: ☐ Commercial (Taxable) ☐ Residential (Non-Taxable)
Sampled By Name: Caleb Pettigrew
Sampled By Signature:
Date Sampled: 10.10.24
No. of Samples in Shipment: 81

Turn-Around-Time (TAT)

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 32 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☒ 1 Week ☐ 2 Week

Please call ahead for large projects and/or turnaround times 6 Hours or Less. *32 Hour TAT available for select tests only; samples must be submitted by 11:30am.

Test Selection

PLM - Bulk (reporting limit)

☒ PLM EPA 600/R-93/116 (<1%)
☐ PLM EPA NOB (<1%)
☐ POINT COUNT
☐ 400 (<0.25%) ☐ 1,000 (<0.1%)
☐ POINT COUNT w/ GRAVIMETRIC
☐ 400 (<0.25%) ☐ 1,000 (<0.1%)
☐ NIOSH 9002 (<1%)
☐ NYS 198.1 (Friable - NY)
☐ NYS 198.6 NOB (Non-Friable - NY)
☐ NYS 198.8 (Vermiculite SM-V)

TEM - Bulk

☐ TEM EPA NOB
☐ NYS NOB 198.4 (Non-Friable - NY)
☐ TEM EPA 600/R-93/116 w Milling Prep (0.1%)

Other Tests (please specify)

☒ Positive Stop - Clearly Identified Homogeneous Areas (HA)

Sample Number	HA Number	Sample Location	Material Description
01A-B		Exterior	Grey caulk under window
02A-B		↓	white caulk on siding
03A-B		↓	white caulk around door
04A-B		Shed exterior	Black roof paper
05A-B		↓	white caulk on window
06A-B		Exterior	Caulk at base of siding
07A-B		↓	Front door white glazing
08A-B		Interior - Second floor	Sheetrock
09A-B		↓	Joint compound
10A-B		Interior - First floor	Peyboard

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Method of Shipment: Drop off

Relinquished by:		Date/Time: 10-11-24 05:30	Sample Condition Upon Receipt:		
			Received by:	RHP	Date/Time: 08:30
Relinquished by:		Date/Time:	Received by:	REC'D EMSL-BOSTON	Date/Time: OCT 11 2024

Controlled Document - Asbestos Bulk R7 9/14/2021

☒ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

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OrderID: 132406280

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Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

132406280

EMSL Analytical, Inc.
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Cinnaminson, NJ 08077
PHONE: (800) 220-3675
EMAIL: [illegible]

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample Number	HA Number	Sample Location	Material Description
11 A-B		Interior - First floor	Kitchen wall tile grout
12 A-B		↓	Floral self stick floor tile
13 A-B		↓	Bathroom wall tile grout
14 A-B		↓	Bathroom wall tile adhesive
15 A-B		↓	Kitchen wall tile adhesive
16 A-C		Basement	Wall plaster skim coat
17 A-C		↓	Wall plaster rough coat
18 A-C		↓	White HVAC sealant
19 A-B		Exterior	Black construction paper
20 A-B		Basement	Red construction paper
21 A-C		Interior - First floor	Chimney plaster skim coat
22 A-C		↓	Chimney plaster rough coat
23 A-B		Exterior	White siding
24 A-B		↓	Roof paper
25 A-B		↓	Grey window caulk on steel frame over original wind
26 A-B		↓	Red window glazing
27 A-B		↓	Black window glazing
28 A-B		Interior - First floor	Kitchen self stick tile
29 A-B		↓	Kitchen felt paper under tile
30 A-B		↓	Sheetrock
31 A-B		↓	Joint compound
32 A-B		↓	First layer of wallpaper
33 A-B		↓	Second layer of wallpaper
34 A-B		↓	Wallpaper adhesive
35 A-C		↓	Ceiling plaster skim coat

Method of Shipment: Dropoff		Sample Condition Upon Receipt:	
Relinquished by: [signature]	Date/Time: 10-11-24 05:30	Received by: [signature] for rnh	Date/Time
Relinquished by:	Date/Time:	Received by: REC'D EMSL-BOSTON OCT 11 2024	Date/Time

Controlled Document - Asbestos Bulk R7 09/14/2021

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OrderID: 132406280

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Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

132406280

EMSL Analytical, Inc.
5 Constitution Way, Unit A
Woburn, MA 01801

PHONE: (781) 933-8411
EMAIL: boston@emsl.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample Number	HA Number	Sample Location	Material Description
36A-C		Interior - First floor	ceiling plaster rough coat
37A-B		↓	Kitchen wallpaper adhesive

Method of Shipment: Drop-off

Relinquished by: [signature] Date/Time: 10-11-24 5:30

Relinquished by: Date/Time:

Sample Condition Upon Receipt:

Received by: REC'D EMSL-BOSTON Date/Time: OCT 11 2024

Received by: Date/Time:

Controlled Document - Asbestos Bulk R7 09/14/2021

[X] AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

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Page 3 of 3

EMSL Analytical, Inc.

10752 Baltimore Avenue, Beltsville, MD, 20705
Telephone: (301)-937-5700 Fax:(301)-937-5701
EMSL-BV-19

EMSL Order ID: 192451099
LIMS Reference ID: NC51099
EMSL Customer ID: WESA77

Attention: Craig Miner
Weston & Sampson Engineers Inc. [WESA77]
712 Brook Street, Suite 103
Rocky Hill, CT 06067
(860) 616-6451
minerc@wseinc.com

Project Name: 350 RTE 25 WARREN
Customer PO:
EMSL Sales Rep: Sheryl Steinmetz
Received: 10/11/2024 09:15
Reported: 10/17/2024 14:34

Analytical Results

Analyte	Results	RL	Weight(g)	Prep Date & Tech	Prep Method	Analysis Date & Analyst	Analytical Method	Q	DF
Client Sample ID: L1/EXT - WHITE PAINT									**Date Sampled: 10/10/24**
Matrix: Chips									**LIMS Reference ID: NC51099-01**
Lead	2.9 % wt	0.078 % wt	0.2555	10/17/24 ROC	SW-846 3050B	10/17/24 ROC	SW 846-7000B	D	10
Sample Comments:									
Client Sample ID: L2/EXT - BLK SHUTTER PAINT									**Date Sampled: 10/10/24**
Matrix: Chips									**LIMS Reference ID: NC51099-02**
Lead	3.2 % wt	0.078 % wt	0.2553	10/17/24 ROC	SW-846 3050B	10/17/24 ROC	SW 846-7000B	D	10
Sample Comments:									
Client Sample ID: L3/EXT - RED PAINT									**Date Sampled: 10/10/24**
Matrix: Chips									**LIMS Reference ID: NC51099-03**
Lead	2.5 % wt	0.079 % wt	0.253	10/17/24 ROC	SW-846 3050B	10/17/24 ROC	SW 846-7000B	D	10
Sample Comments:									
Client Sample ID: L4/INT - WHITE INT PAINT									**Date Sampled: 10/10/24**
Matrix: Chips									**LIMS Reference ID: NC51099-04**
Lead	2.5 % wt	0.079 % wt	0.2535	10/17/24 ROC	SW-846 3050B	10/17/24 ROC	SW 846-7000B	D	10
Sample Comments:									
Client Sample ID: L5/EXT- WHITE PAINT BEHIND SIDES									**Date Sampled: 10/10/24**
Matrix: Chips									**LIMS Reference ID: NC51099-05**
Lead	4.3 % wt	0.80 % wt	0.2503	10/17/24 ROC	SW-846 3050B	10/17/24 ROC	SW 846-7000B	D	100
Sample Comments:									

EMSL Analytical, Inc.

10752 Baltimore Avenue, Beltsville, MD, 20705
Telephone: (301)-937-5700 Fax:(301)-937-5701
EMSL-BV-19

EMSL Order ID: 192451099
LIMS Reference ID: NC51099
EMSL Customer ID: WESA77

Attention: Craig Miner
Weston & Sampson Engineers Inc. [WESA77]
712 Brook Street, Suite 103
Rocky Hill, CT 06067
(860) 616-6451
minerc@wseinc.com

Project Name: 350 RTE 25 WARREN
Customer PO:
EMSL Sales Rep: Sheryl Steinmetz
Received: 10/11/2024 09:15
Reported: 10/17/2024 14:34

Certified Analyses included in this Report

Analyte	Certifications
SW 846-7000B in Chips	
Lead	19-A2LA Chemistry

List of Certifications

Code	Description	Number	Expires
19-A2LA Chemistry	A2LA Environmental and Chemistry	2845.02	01/31/2025

Please see the specific Field of Testing (FOT) on www.emsl.com <http://www.emsl.com> for a complete listing of parameters for which EMSL is certified.

Notes and Definitions

Item	Definition
D	Analyte was reported from a dilution run.
(Dig)	For metals analysis, sample was digested.
[2C]	Reported from the second channel in dual column analysis.
DF	Dilution Factor
MDL	Method Detection Limit.
ND	Analyte was NOT DETECTED at or above the detection limit.
NR	Spike/Surrogate showed no recovery.
Q	Qualifier
RL	Reporting Limit
Wet	Sample is not dry weight corrected.

Measurement of uncertainty and any applicable definitions of method modifications are available upon request. Per EPA NLLAP policy, sample results are not blank corrected.

Joe Centifonti Laboratory Manager or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. QC sample results are within quality control criteria and met method specifications unless otherwise noted. All results for soil samples are reported on a dry weight basis, unless otherwise noted.

Analysis following EMSL SOP for the Determination of Environmental Lead by FLAA. The laboratory has a reporting limit of 0.008% by wt., based upon a minimum sample weight of 0.25g submitted to the lab, and is not responsible for any result or reporting limit provided in mg/cm2 since it is dependent upon an area value provided by non-lab personnel. A "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty and definitions of modifications are available upon request. Results in this report are not blank corrected unless specified.

T0256598

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Lead Chain of Custody

EMSL Order Number / Lab Use Only

192451099

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: CinnaminsonLeadLab@emsl.com

Customer Information		Billing Information	
Customer ID:		Billing ID:	
Company Name:	Weston & Sampson	Company Name:	
Contact Name:	Craig Miner	Billing Contact:	
Street Address:	55 Walkers Brook Drive	Street Address:	
City, State, Zip:	Reading, MA 01867	Country: USA	City, State, Zip: / Country:
Phone:	1-800-SAMPSON		Phone:
Email(s) for Report:	minerc@wseinc.com, Pettigrew.Caleb@wseinc.com		Email(s) for Invoice:

Project Information

Project Name/No:	350 Rte. 25 Warren		Purchase Order:
EMSL LIMS Project ID: (if applicable, EMSL will provide)		US State where samples collected: NH	State of Connecticut (CT) must select project location: ☐ Commercial (Taxable) ☐ Residential (Non-Taxable)
Sampled By Name:	Caleb Pettigrew	Sampled By Signature:	No. of Samples in Shipment: 5

Turn-Around-Time (TAT)

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 32 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☒ 1 Week ☐ 2 Week

Please call ahead for large projects and/or turnaround times 6 Hours or Less. *32 Hour TAT available for select tests only, samples must be submitted by 11:30am.

MATRIX	METHOD	INSTRUMENT	REPORTING LIMIT	SELECTION
CHIPS ☒ % by wt. ☐ ppm (mg/kg) ☐ mg/cm² *Reporting Limit based on a minimum 0.25g sample weight. **Not appropriate for Ceramic Tiles - XRF is recommended	SW 846-7000B	Flame Atomic Absorption	0.008% (80ppm)	☒
	SW 846-6010D*	ICP-OES	0.0004% (4ppm)	☐
AIR	NIOSH 7082	Flame Atomic Absorption	4µg/filter	☐
	NIOSH 7300M / NIOSH 7303M	ICP-OES	0.5µg/filter	☐
	NIOSH 7300M / NIOSH 7303M	ICP-MS	0.05µg/filter	☐
WIPE ☐ ASTM ☐ NON-ASTM *If no box is checked, non-ASTM Wipe is assumed	SW 846-7000B	Flame Atomic Absorption	10µg/wipe	☐
	SW 846-6010D*	ICP-OES	1.0µg/wipe	☐
TCLP	SW 846-1311 / 7000B / SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	SW 846-1311 / SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)	☐
SPLP	SW 846-1312 / 7000B / SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	SW 846-1312 / SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)	☐
TTLC	22 CCR App. II, 7000B	Flame Atomic Absorption	40mg/kg (ppm)	☐
	22 CCR App. II, SW 846-6010D*	ICP-OES	2mg/kg (ppm)	☐
STLC	22 CCR App. II, 7000B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	22 CCR App. II, SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)	☐
Soil	SW 846-7000B	Flame Atomic Absorption	40mg/kg (ppm)	☐
	SW 846-6010D*	ICP-OES	2mg/kg (ppm)	☐
Wastewater	SM 3111B / SW 846-7000B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
Unpreserved ☐ / Preserved with HNO3 ☐ PH<2	EPA 200.7	ICP-OES	0.020 mg/L (ppm)	☐
Drinking Water	EPA 200.5	ICP-OES	0.003 mg/L (ppm)	☐
Unpreserved ☐ / Preserved with HNO3 ☐ PH<2	EPA 200.8	ICP-MS	0.001 mg/L (ppm)	☐
TSP/SPM Filter	40 CFR Part 50	ICP-OES	12 µg/filter	☐
Other:				☐

Sample Number	Sample Location	Volume / Area	Date / Time Sampled
L1	Exterior	White paint	10-10-24
L2	↓	Black shutter paint	↓
L3	↓	Red paint	↓
L4	Interior	white interior paint	↓
L5	Exterior	white paint behind siding	↓

Method of Shipment: Dropoff

Sample Condition Upon Receipt:

Relinquished by:	Date/Time: 10-11-24 05:30	Received by: REC'D EMSL-BOSTON	Date/Time: 0830 OCT 11 2024
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - COC-25 Lead R17 05/09/2022

*6010C Available Upon Request

☒ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

2024 OCT 14 AM 9:37

T0056598

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Lead Chain of Custody

EMSL Order Number / Lab Use Only

192451099

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: CinnaminsonLeadLab@emsl.com

Customer Information		Billing Information	
Customer ID:		Billing ID:	
Company Name:	Weston & Sampson	Company Name:	
Contact Name:	Craig Miner	Billing Contact:	
Street Address:	55 Walkers Brook Drive	Street Address:	
City, State, Zip:	Reading, MA 01867	Country: USA	City, State, Zip: / Country:
Phone:	1-800-SAMPSON		Phone:
Email(s) for Report:	minerc@wseinc.com, Pettigrew.Caleb@wseinc.com		Email(s) for Invoice:

Project Information

Project Name/No:	350 Rte. 25 Warren		Purchase Order:
EMSL LIMS Project ID: (If applicable, EMSL will provide)		US State where samples collected: NH	State of Connecticut (CT) must select project location: ☐ Commercial (Taxable) ☐ Residential (Non-Taxable)
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	22 CCR App. II, SW 846-6010D*	ICP-OES	2mg/kg (ppm)	☐
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Drinking Water	EPA 200.5	ICP-OES	0.003 mg/L (ppm)	☐
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Other:				☐

Sample Number	Sample Location	Volume / Area	Date / Time Sampled
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L2	↓	Black shutter paint	↓
L3	↓	Red paint	↓
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Method of Shipment: Dropoff

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Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - COC-25 Lead R17 05/03/2022

*6010C Available Upon Request

☒ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

24 OCT 14 AM 9:37

Appendix B – NHDES Shoreland Impact Permits

The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner

SHORELAND IMPACT PERMIT 2025-02844

NOTE CONDITIONS

PERMITTEE:	**TOWN OF WARREN** **PO BOX 40** **WARREN NH 03279**
PROJECT LOCATION:	**350 NH RT 25, WARREN** **Tax Map/Block/Lot(s): 240/no block/46**
WATERBODY:	**BAKER RIVER**
APPROVAL DATE:	**NOVEMBER 14, 2025** **EXPIRATION DATE: NOVEMBER 14, 2030**

Shoreland Permit Application 2025-02844 has been found to meet or exceed the requirements of RSA 483-B as required per RSA 483-B:6, II. The New Hampshire Department of Environmental Services (NHDES) hereby issues this Shoreland Impact Permit with conditions pursuant to RSA 483-B:6, II.

PERMIT DESCRIPTION:
Impact 6,655 square feet of protected shoreland within Lot 46 on Warren Tax Map 240 in order to demolish a dwelling and shed, as well as plant native vegetation.

Impervious Surface Percentage Approved: Reduced to 0%

Natural Woodland Area Required per RSA 483-B:9, V(b): 80 square feet

THE FOLLOWING PROJECT-SPECIFIC CONDITIONS HAVE BEEN APPLIED TO THE PERMIT PURSUANT TO ENV-WQ 1406.15(c):

1. All work shall be in accordance with plans by Weston & Sampson Engineers, Inc., dated September 2025 and received by the New Hampshire Department of Environmental Services (NHDES) on October 17, 2025, pursuant to Env-Wq 1406.15(f).
2. Pursuant to RSA 483-B:9, V(b)(2), no native vegetation shall be removed from within the Natural Woodland Buffer located between 50 and 150 feet landward of the reference line.
3. Within three days of final grading or temporary suspension of work in an area that is in or adjacent to wetlands or surface waters, all exposed soil areas shall be stabilized by seeding and mulching during the growing season, or if not within the growing season, by mulching with tack or netting and pinning on slopes steeper than 3:1 as required pursuant to RSA 483-B:9, V(d) Erosion and Siltation, (1).
4. This permit shall not be interpreted as acceptance or approval of any impact that will occur within wetlands jurisdiction regulated under RSA 482-A including all wetlands, surface waters and their banks, the tidal-buffer zone, and sand dunes. The owner is responsible for maintaining compliance with RSA 482-A and Administrative Rules Env-Wt 100 - 900 and obtaining any Wetland Impact Permit that may be required prior to construction, excavation or fill that will occur within Wetlands jurisdiction as required pursuant to RSA 483-B:6, I(b).
5. This permit shall not preclude NHDES from taking any enforcement or revocation action as authorized pursuant to 483-B:5, I, if NHDES later determines that any of the structures depicted as "existing" on the plans submitted by the applicant were not previously permitted or grandfathered.

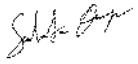
THE FOLLOWING STANDARD PROJECT CONDITIONS SHALL BE MET PURSUANT TO ENV-WQ 1406.20:

1. Erosion and siltation control measures shall be installed prior to the start of work, be maintained throughout the project, and remain in place until all disturbed surfaces are stabilized.
2. Erosion and siltation controls shall be appropriate to the size and nature of the project and to the physical characteristics of the site, including slope, soil type, vegetative cover, and proximity to wetlands or surface waters.
3. No person undertaking any activity in the protected shoreland shall cause or contribute to, or allow the activity to cause or contribute to, any violations of the surface water quality standards established in Env-Wq 1700, and the requirements in Env-Wq 1404.01(a) and(b).
4. Any fill used shall be clean sand, gravel, rock, or other suitable material.
5. For any project where mechanized equipment will be used, orange construction fence shall be installed prior to the start of work at the limits of the temporary impact area as shown on the approved plans; be maintained throughout the project; and remain in place until all mechanized equipment has been removed from the site.

ANY INDIVIDUAL CONDUCTING WORK UNDER THIS PERMIT IS ADVISED OF THE FOLLOWING:

1. During construction, a copy of this permit should be posted on site in a prominent location visible to inspecting personnel.
2. This permit does not convey a property right, nor authorize any injury to property of others, nor invasion of rights of others.
3. Pursuant to Env-Wq 1406.21, transfer of this permit to a new owner requires notification to, and approval of, NHDES.
4. This project has been screened for potential impact to **known** occurrences of protected species and exemplary natural communities in the immediate area. Since many areas have never been surveyed, or only cursory surveys have been performed, unidentified sensitive species or communities may be present. This permit does not absolve the permittee from due diligence in regard to state, local or federal laws regarding such communities or species. This permit does not authorize in any way the take of threatened or endangered species, as defined by RSA 212-A:2, or of any protected species or exemplary natural communities, as defined in RSA 217-A:3.

APPROVED:



Salvatore Ferragine
Shoreland Permitting, Shoreland Program
Wetlands Bureau, Land Resources Management
Water Division

THIS PERMIT IS NOT VALID UNTIL SIGNED BY THE PARTIES BELOW (Env-Wq 1406.21(c))

PERMITTEE SIGNATURE (required)

PRINCIPAL CONTRACTOR SIGNATURE (required, if any)

The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner

SHORELAND IMPACT PERMIT 2025-02841

NOTE CONDITIONS

PERMITTEE:	**TOWN OF WARREN** **AUSTIN ALBRO** **PO BOX 40** **WARREN NH 03279**
PROJECT LOCATION:	**354 NH ROUTE 25, WARREN** **Tax Map/Block/Lot(s):**
WATERBODY:	**BAKER RIVER**
APPROVAL DATE:	**NOVEMBER 15, 2025** **EXPIRATION DATE: NOVEMBER 15, 2030**

Shoreland Permit Application 2025-02841 has been found to meet or exceed the requirements of RSA 483-B as required per RSA 483-B:6, II. The New Hampshire Department of Environmental Services (NHDES) hereby issues this Shoreland Impact Permit with conditions pursuant to RSA 483-B:6, II.

PERMIT DESCRIPTION:
Impact 5,254 square feet (SF) of protected shoreland in order to the Town of Warren is seeking to demolish existing structures on two properties along the Baker River. These existing on-site buildings are currently in poor condition, due in part to historical flooding from the adjacent section of the Baker River that borders the Site to the east.

Impervious Surface Percentage Approved: 0%

Natural Woodland Area Required per RSA 483-B:9, V, (b): 314 SF.

THE FOLLOWING PROJECT-SPECIFIC CONDITIONS HAVE BEEN APPLIED TO THE PERMIT PURSUANT TO ENV-WQ 1406.15(c):

1. All work shall be in accordance with plans by Weston & Sampson dated September 2025 and received by the New Hampshire Department of Environmental Services (NHDES) on October 17, 2025 pursuant to Env-Wq 1406.15(f).
2. Within three days of final grading or temporary suspension of work in an area that is in or adjacent to wetlands or surface waters, all exposed soil areas shall be stabilized by seeding and mulching during the growing season, or if not within the growing season, by mulching with tack or netting and pinning on slopes steeper than 3:1 as required pursuant to RSA 483-B:9, V(d) Erosion and Siltation, (1).
3. This permit shall not be interpreted as acceptance or approval of any impact that will occur within wetlands jurisdiction regulated under RSA 482-A including all wetlands, surface waters and their banks. The owner is responsible for maintaining compliance with RSA 482-A and Administrative Rules Env-Wt 100 - 900 and obtaining any Wetland Impact Permit that may be required prior to construction, excavation or fill that will occur within Wetlands jurisdiction as required pursuant to RSA 483-B:6, I(b).
4. This permit shall not preclude NHDES from taking any enforcement or revocation action as authorized pursuant to 483-B:5, I, if NHDES later determines that any of the structures depicted as "existing" on the plans submitted by the applicant were not previously permitted or grandfathered.

THE FOLLOWING STANDARD PROJECT CONDITIONS SHALL BE MET PURSUANT TO ENV-WQ 1406.20:

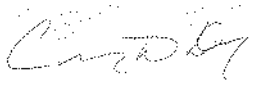
1. Erosion and siltation control measures shall be installed prior to the start of work, be maintained throughout the project, and remain in place until all disturbed surfaces are stabilized.

2. Erosion and siltation controls shall be appropriate to the size and nature of the project and to the physical characteristics of the site, including slope, soil type, vegetative cover, and proximity to wetlands or surface waters.
3. No person undertaking any activity in the protected shoreland shall cause or contribute to, or allow the activity to cause or contribute to, any violations of the surface water quality standards established in Env-Wq 1700, and the requirements in Env-Wq 1404.01(a) and(b).
4. Any fill used shall be clean sand, gravel, rock, or other suitable material.
5. For any project where mechanized equipment will be used, orange construction fence shall be installed prior to the start of work at the limits of the temporary impact area as shown on the approved plans; be maintained throughout the project; and remain in place until all mechanized equipment has been removed from the site.

ANY INDIVIDUAL CONDUCTING WORK UNDER THIS PERMIT IS ADVISED OF THE FOLLOWING:

1. During construction, a copy of this permit should be posted on site in a prominent location visible to inspecting personnel.
2. This permit does not convey a property right, nor authorize any injury to property of others, nor invasion of rights of others.
3. Pursuant to Env-Wq 1406.21, transfer of this permit to a new owner requires notification to, and approval of, NHDES.
4. This project has been screened for potential impact to **known** occurrences of protected species and exemplary natural communities in the immediate area. Since many areas have never been surveyed, or only cursory surveys have been performed, unidentified sensitive species or communities may be present. This permit does not absolve the permittee from due diligence in regard to state, local or federal laws regarding such communities or species. This permit does not authorize in any way the take of threatened or endangered species, as defined by RSA 212-A:2, or of any protected species or exemplary natural communities, as defined in RSA 217-A:3.

APPROVED:



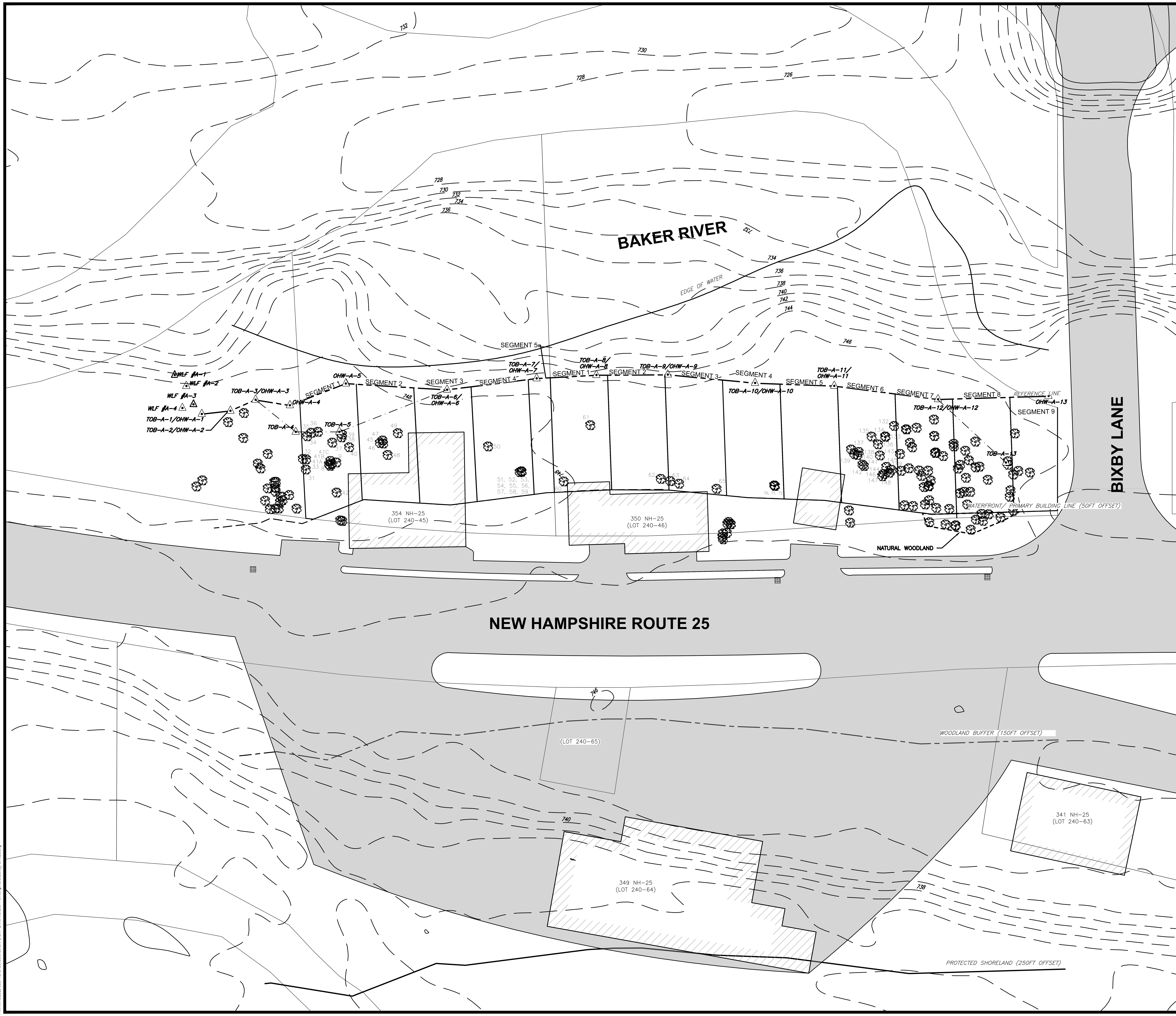
Craig W. Day
Shoreland/Shoreline Specialist, Shoreland Program
Wetlands Bureau, Land Resources Management
Water Division

THIS PERMIT IS NOT VALID UNTIL SIGNED BY THE PARTIES BELOW (Env-Wq 1406.21(c))

PERMITTEE SIGNATURE (required)

PRINCIPAL CONTRACTOR SIGNATURE (required, if any)

Appendix C – NHDES Shoreland Impact Permit Drawing Set



LEGEND:

ORDINARY HIGH WATER LINE (REFERENCE LINE)
PRIMARY BUILDING LINE (50FT OFFSET)
WOODLAND BUFFER LINE (150FT OFFSET)
PROTECTED SHORELAND (250FT OFFSET)
NATURAL WOODLAND AREA
TOP OF BANK
PROPERTY BOUNDARY
734 CONTOUR (ELEVATION IN FT ABOVE MSL)
EXISTING BUILDING
PAVED AREA
SEGMENT 4 WATERFRONT BUFFER SEGMENTS
TOB-A-6/OHW-A-6 WETLAND / TOP OF BANK FLAG
140 TREE (ID)
CATCH BASIN

WATERFRONT BUFFER SEGMENTS EXISTING TREE AND SAPLING SCORES

LOT 240-45

Segment	Tree/Sapling ID	Diameter (IN)	Species	Score
1	8	5	Grey birch	5
1	9	4	Grey birch	5
1	31	2	Sumac	1
1	32	1	Sumac	1
1	33	1	Sumac	1
1	34	2	Sumac	1
1	35	2	Sumac	1
1	36	1	Sumac	1
1	37	1	Sumac	1
1	38	1	Sumac	1
1	39	1	Sumac	1
1	40	1	White pine	1
1	41A	1	Grey birch	1
1	41B	3	Grey birch	1
1	41C	2	Grey birch	1
1	42	2	Quaking aspen	1
Segment 1 Cumulative Existing Tree and Sapling Score				**24**
2	45	3	Paper birch	1
2	46	3	Paper birch	1
2	47	2	Paper birch	1
2	48	6	Quaking aspen	5
2	49	2	Quaking aspen	1
Segment 2 Cumulative Existing Tree and Sapling Score				**9**
3	N/A	N/A	None	0
Segment 3 Cumulative Existing Tree and Sapling Score				**0**
4	50	5	Black locust	5
4	51	8	American elm	10
4	52	8	American elm	10
4	53	8	American elm	10
4	54	7	American elm	10
4	55	7	American elm	10
4	56	7	American elm	10
4	57	6	American elm	5
4	58	6	American elm	5
4	59	2	Green ash	1
Segment 4 Cumulative Existing Tree and Sapling Score				**76**
5	N/A	N/A	None	0
Segment 5 Cumulative Existing Tree and Sapling Score				**0**

LOT 240-46

Segment	Tree/Sapling ID	Diameter (IN)	Species	Score
1	60	4	White birch	5
1	61	2	Yellow birch	1
Segment 1 Cumulative Existing Tree and Sapling Score				**6**
2	62	2	Quaking aspen	1
Segment 2 Cumulative Existing Tree and Sapling Score				**1**
3	63	1	Quaking aspen	1
3	64	2	Quaking aspen	1
3	65	1	Yellow birch	1
Segment 3 Cumulative Existing Tree and Sapling Score				**3**
4	70	6	Bradford pear	5
4	71	6	Bradford pear	5
4	72	7	Bradford pear	10
Segment 4 Cumulative Existing Tree and Sapling Score				**20**
5	N/A	N/A	None	0
Segment 5 Cumulative Existing Tree and Sapling Score				**0**
6	132	5	Paper birch	5
6	133	2	Paper birch	1
6	134	2	Paper birch	1
6	135	6	Paper birch	5
6	136	6	Red oak	5
6	137	14	Red oak	15
6	138	7	Paper birch	10
6	139	1	American beech	1
6	140	1	American beech	1
6	141	2	American beech	1
6	142	1	American beech	1
6	143	7	Black cherry	10
6	144	7	Paper birch	10
6	145	4	Red maple	5
6	146	3	Red maple	1
6	147	3	Red maple	1
6	148	4	Red oak	5
6	149	1	Red maple	1
Segment 6 Cumulative Existing Tree and Sapling Score				**79**
7	Outside Limit of Work – No Tree Cutting			N/A
Segment 7 Cumulative Existing Tree and Sapling Score				**N/A**
8	Outside Limit of Work – No Tree Cutting			N/A
Segment 8 Cumulative Existing Tree and Sapling Score				**N/A**
9	Outside Limit of Work – No Tree Cutting			N/A
Segment 9 Cumulative Existing Tree and Sapling Score				**N/A**

NOTES:

1. SITE FEATURES INCLUDING WETLAND / TOP OF BANK FLAGS AND TREE LOCATIONS ARE BASED ON GPS DATA COLLECTED BY WESTON & SAMPSON ON JULY 30, 2025. CONTOURS WERE OBTAINED FROM A NEW HAMPSHIRE GRANIT LIDAR DATABASE. ADDITIONAL SITE FEATURES WERE DERIVED FROM AERIAL IMAGERY.
2. WETLAND DELINEATION CONDUCTED BY DEVIN HERRICK, CWS AND ALEX DWYER ON JULY 30, 2025.

0 10' 20' 40'
SCALE: 1" = 20'

Project:
TOWN OF WARREN
NEW HAMPSHIRE

DEMOLITION OF STRUCTURES
NH-25

Weston & Sampson
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EXISTING CONDITIONS PLAN

Sheet Number:
C-101

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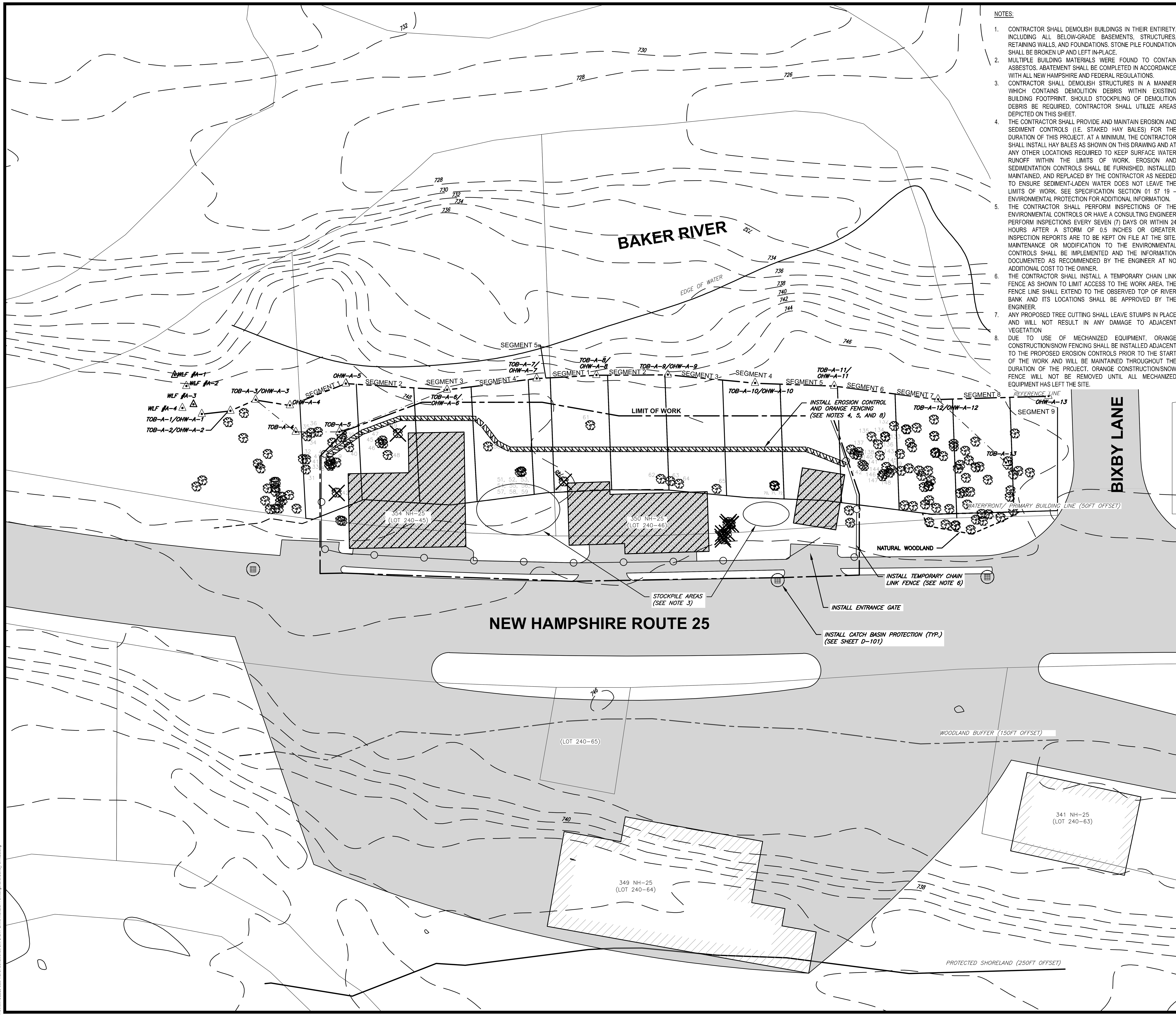

NOTES:

1. CONTRACTOR SHALL DEMOLISH BUILDINGS IN THEIR ENTIRETY, INCLUDING ALL BELOW-GRADE BASEMENTS, STRUCTURES, RETAINING WALLS, AND FOUNDATIONS. STONE PILE FOUNDATION SHALL BE BROKEN UP AND LEFT IN-PLACE.
2. MULTIPLE BUILDING MATERIALS WERE FOUND TO CONTAIN ASBESTOS. ABATEMENT SHALL BE COMPLETED IN ACCORDANCE WITH ALL NEW HAMPSHIRE AND FEDERAL REGULATIONS.
3. CONTRACTOR SHALL DEMOLISH STRUCTURES IN A MANNER WHICH CONTAINS DEMOLITION DEBRIS WITHIN EXISTING BUILDING FOOTPRINT. SHOULD STOCKPILING OF DEMOLITION DEBRIS BE REQUIRED, CONTRACTOR SHALL UTILIZE AREAS DEPICTED ON THIS SHEET.
4. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN EROSION AND SEDIMENT CONTROLS (I.E. STAKED HAY BALES) FOR THE DURATION OF THIS PROJECT. AT A MINIMUM, THE CONTRACTOR SHALL INSTALL HAY BALES AS SHOWN ON THIS DRAWING AND AT ANY OTHER LOCATIONS REQUIRED TO KEEP SURFACE WATER RUNOFF WITHIN THE LIMITS OF WORK. EROSION AND SEDIMENTATION CONTROLS SHALL BE FURNISHED, INSTALLED, MAINTAINED, AND REPLACED BY THE CONTRACTOR AS NEEDED TO ENSURE SEDIMENT-LADEN WATER DOES NOT LEAVE THE LIMITS OF WORK. SEE SPECIFICATION SECTION 01 57 19 – ENVIRONMENTAL PROTECTION FOR ADDITIONAL INFORMATION.
5. THE CONTRACTOR SHALL PERFORM INSPECTIONS OF THE ENVIRONMENTAL CONTROLS OR HAVE A CONSULTING ENGINEER PERFORM INSPECTIONS EVERY SEVEN (7) DAYS OR WITHIN 24 HOURS AFTER A STORM OF 0.5 INCHES OR GREATER. INSPECTION REPORTS ARE TO BE KEPT ON FILE AT THE SITE. MAINTENANCE OR MODIFICATION TO THE ENVIRONMENTAL CONTROLS SHALL BE IMPLEMENTED AND THE INFORMATION DOCUMENTED AS RECOMMENDED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
6. THE CONTRACTOR SHALL INSTALL A TEMPORARY CHAIN LINK FENCE AS SHOWN TO LIMIT ACCESS TO THE WORK AREA. THE FENCE LINE SHALL EXTEND TO THE OBSERVED TOP OF RIVER BANK AND ITS LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
7. ANY PROPOSED TREE CUTTING SHALL LEAVE STUMPS IN PLACE AND WILL NOT RESULT IN ANY DAMAGE TO ADJACENT VEGETATION
8. DUE TO USE OF MECHANIZED EQUIPMENT, ORANGE CONSTRUCTION/SNOW FENCING SHALL BE INSTALLED ADJACENT TO THE PROPOSED EROSION CONTROLS PRIOR TO THE START OF THE WORK AND WILL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. ORANGE CONSTRUCTION/SNOW FENCE WILL NOT BE REMOVED UNTIL ALL MECHANIZED EQUIPMENT HAS LEFT THE SITE.

LEGEND:

- ORDINARY HIGH WATER LINE (REFERENCE LINE)
- PRIMARY BUILDING LINE (50FT OFFSET)
- WOODLAND BUFFER LINE (150FT OFFSET)
- PROTECTED SHORELAND (250FT OFFSET)
- TOP OF BANK
- NATURAL WOODLAND AREA
- PROPERTY BOUNDARY
- 734 — CONTOUR (ELEVATION IN FT ABOVE MSL)
- LIMIT OF WORK
- TEMPORARY 6-FT FENCE
- EROSION CONTROL (STAKED HAY BALES)
- BUILDING TO BE DEMOLISHED
- PAVED AREA
- SEGMENT 4 — WATERFRONT BUFFER SEGMENTS
- PERMANENT IMPACT AREA
- TOB-A-6/OHW-A-6 — WETLAND / TOP OF BANK FLAG
- 142 — TREE (ID)
- TREE TO BE REMOVED
- INSTALL CATCH BASIN PROTECTION

WATERFRONT BUFFER SEGMENTS EXISTING TREE AND SAPLING SCORES (CONSTRUCTION PHASE)

LOT 240-45

Segment	Tree/Sapling ID	Diameter (IN)	Species	Score
1	8	5	Greybirch	5
1	9	4	Greybirch	5
1	31	2	Sumac	1
1	32	1	Sumac	1
1	33	1	Sumac	1
1	34	2	Sumac	1
1	35	2	Sumac	1
1	36	1	Sumac	1
1	37	1	Sumac	1
1	38	1	Sumac	1
1	39	1	Sumac	1
1	40	1	White pine	1
1	41A	1	Greybirch	1
1	41B	3	Greybirch	1
1	41C	2	Greybirch	1
~~1~~	~~42~~	~~2~~	~~Quaking aspen~~	~~0~~
Segment 1 Cumulative Existing Tree and Sapling Score				**23**
2	45	3	Paper birch	1
2	46	3	Paper birch	1
2	47	2	Paper birch	1
2	48	6	Quaking aspen	5
~~2~~	~~49~~	~~2~~	~~Quaking aspen~~	~~0~~
Segment 2 Cumulative Existing Tree and Sapling Score				**8**
3	N/A	N/A	None	0
Segment 3 Cumulative Existing Tree and Sapling Score				**0**
4	50	5	Black locust	5
4	51	8	American elm	10
4	52	8	American elm	10
4	53	8	American elm	10
4	54	7	American elm	10
4	55	7	American elm	10
4	56	7	American elm	10
4	57	6	American elm	5
4	58	6	American elm	5
4	59	2	Green ash	1
Segment 4 Cumulative Existing Tree and Sapling Score				**76**
5	N/A	N/A	None	0
Segment 5 Cumulative Existing Tree and Sapling Score				**0**

LOT 240-46

Segment	Tree/Sapling ID	Diameter (IN)	Species	Score
~~1~~	~~60~~	~~4~~	~~White birch~~	~~0~~
1	61	2	Yellow birch	1
Segment 1 Cumulative Existing Tree and Sapling Score				**1**
2	62	2	Quaking aspen	1
Segment 2 Cumulative Existing Tree and Sapling Score				**1**
3	63	1	Quaking aspen	1
3	64	2	Quaking aspen	1
3	65	1	Yellow birch	1
Segment 3 Cumulative Existing Tree and Sapling Score				**3**
4	70	6	Bradford pear	5
4	71	6	Bradford pear	5
4	72	7	Bradford pear	10
Segment 4 Cumulative Existing Tree and Sapling Score				**20**
5	N/A	N/A	None	0
Segment 5 Cumulative Existing Tree and Sapling Score				**0**
6	132	5	Paper birch	5
6	133	2	Paper birch	1
6	134	2	Paper birch	1
6	135	6	Paper birch	5
6	136	6	Red oak	5
6	137	14	Red oak	15
6	138	7	Paper birch	10
6	139	1	American beech	1
6	140	1	American beech	1
6	141	2	American beech	1
6	142	1	American beech	1
6	143	7	Black cherry	10
6	144	7	Paper birch	10
6	145	4	Red maple	5
6	146	3	Red maple	1
6	147	3	Red maple	1
6	148	4	Red oak	5
6	149	1	Red maple	1
Segment 6 Cumulative Existing Tree and Sapling Score				**79**
7	Outside Limit of Work – No Tree Cutting			N/A
Segment 7 Cumulative Existing Tree and Sapling Score				**N/A**
8	Outside Limit of Work – No Tree Cutting			N/A
Segment 8 Cumulative Existing Tree and Sapling Score				**N/A**
9	Outside Limit of Work – No Tree Cutting			N/A
Segment 9 Cumulative Existing Tree and Sapling Score				**N/A**

0 10' 20' 40'

SCALE: 1" = 20'

Project:
TOWN OF WARREN
NEW HAMPSHIRE

DEMOLITION OF STRUCTURES
NH-25

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DEMOLITION & ENVIRONMENTAL PROTECTION PLAN

Sheet Number:
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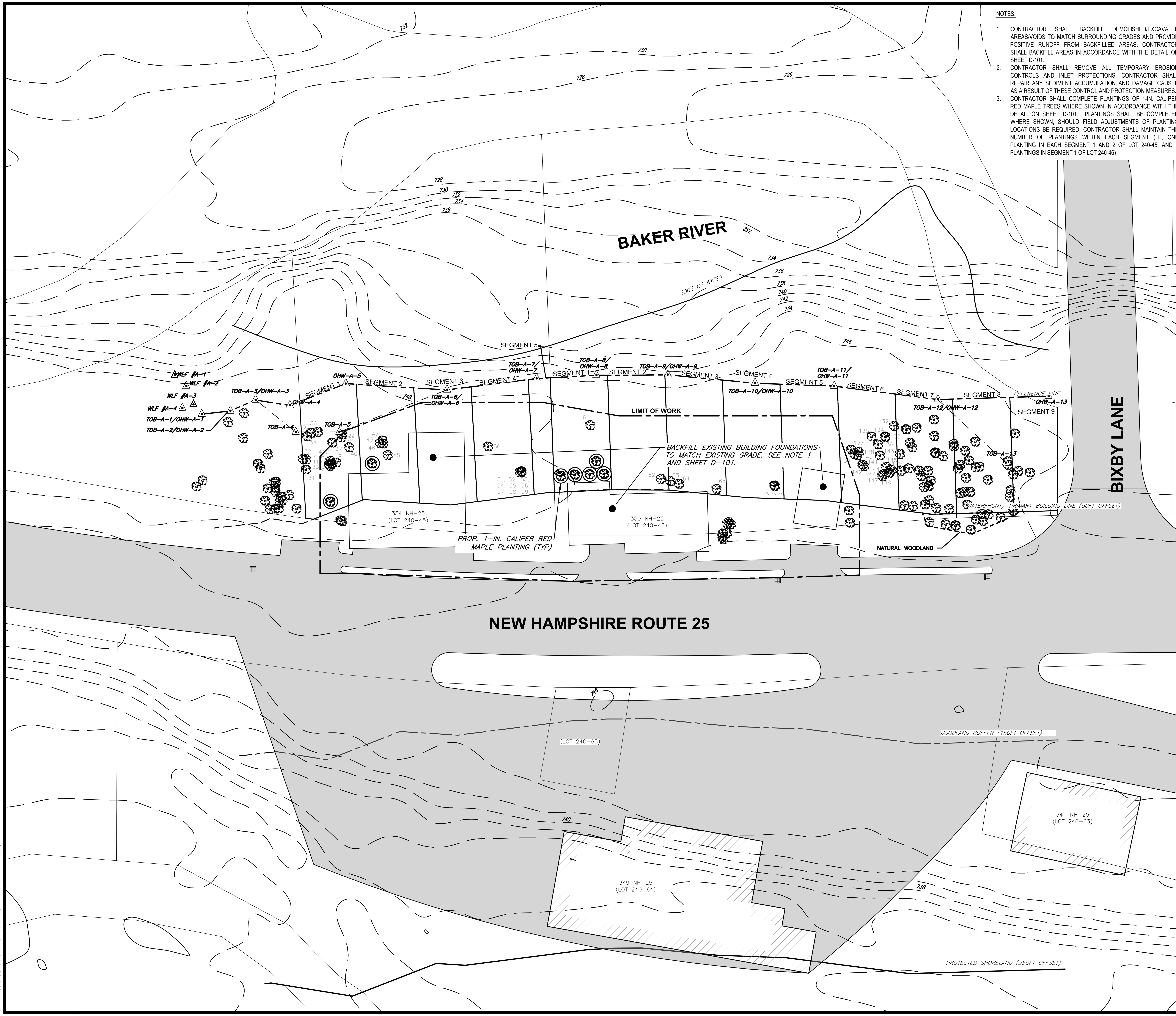

NOTES:

1. CONTRACTOR SHALL BACKFILL DEMOLISHED/EXCAVATED AREAS/VOIDS TO MATCH SURROUNDING GRADES AND PROVIDE POSITIVE RUNOFF FROM BACKFILLED AREAS. CONTRACTOR SHALL BACKFILL AREAS IN ACCORDANCE WITH THE DETAIL ON SHEET D-101.
2. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROLS AND INLET PROTECTIONS. CONTRACTOR SHALL REPAIR ANY SEDIMENT ACCUMULATION AND DAMAGE CAUSED AS A RESULT OF THESE CONTROL AND PROTECTION MEASURES.
3. CONTRACTOR SHALL COMPLETE PLANTINGS OF 1-IN. CALIPER RED MAPLE TREES WHERE SHOWN IN ACCORDANCE WITH THE DETAIL ON SHEET D-101. PLANTINGS SHALL BE COMPLETED WHERE SHOWN; SHOULD FIELD ADJUSTMENTS OF PLANTING LOCATIONS BE REQUIRED, CONTRACTOR SHALL MAINTAIN THE NUMBER OF PLANTINGS WITHIN EACH SEGMENT (I.E, ONE PLANTING IN EACH SEGMENT 1 AND 2 OF LOT 240-45, AND 5 PLANTINGS IN SEGMENT 1 OF LOT 240-46)

LEGEND:

- ORDINARY HIGH WATER LINE (REFERENCE LINE)
- PRIMARY BUILDING LINE (50FT OFFSET)
- WOODLAND BUFFER LINE (150FT OFFSET)
- PROTECTED SHORELAND (250FT OFFSET)
- TOP OF BANK
- NATURAL WOODLAND AREA
- PROPERTY BOUNDARY
- 734 CONTOUR (ELEVATION IN FT ABOVE MSL)
- LIMIT OF WORK
- PAVED AREA
- TOB-A-6/OHW-A-6 WETLAND / TOP OF BANK FLAG
- TD 8 TREE (CALIPER)
- PROP. 1" CALIPER RED MAPLE PLANTING

WATERFRONT BUFFER SEGMENTS EXISTING TREE AND SAPLING SCORES (PROPOSED CONDITIONS)

LOT 240-45

Segment	Tree/Sapling ID	Diameter (IN)	Species	Score
1	8	5	Greybirch	5
1	9	4	Greybirch	5
1	31	2	Sumac	1
1	32	1	Sumac	1
1	33	1	Sumac	1
1	34	2	Sumac	1
1	35	2	Sumac	1
1	36	1	Sumac	1
1	37	1	Sumac	1
1	38	1	Sumac	1
1	39	1	Sumac	1
1	40	1	White pine	1
1	41A	1	Greybirch	1
1	41B	3	Greybirch	1
1	41C	2	Greybirch	1
1	PROP	1	Red Maple	1
Segment 1 Cumulative Existing Tree and Sapling Score				**24**
2	45	3	Paper birch	1
2	46	3	Paper birch	1
2	47	2	Paper birch	1
2	48	6	Quaking aspen	5
2	PROP	1	Red Maple	1
Segment 2 Cumulative Existing Tree and Sapling Score				**9**
3	N/A	N/A	None	0
Segment 3 Cumulative Existing Tree and Sapling Score				**0**
4	50	5	Black locust	5
4	51	8	American elm	10
4	52	8	American elm	10
4	53	8	American elm	10
4	54	7	American elm	10
4	55	7	American elm	10
4	56	7	American elm	10
4	57	6	American elm	5
4	58	6	American elm	5
4	59	2	Green ash	1
Segment 4 Cumulative Existing Tree and Sapling Score				**76**
5	N/A	N/A	None	0
Segment 5 Cumulative Existing Tree and Sapling Score				**0**

LOT 240-46

Segment	Tree/Sapling ID	Diameter (IN)	Species	Score
1	PROP	1	Red Maple	1
1	PROP	1	Red Maple	1
1	PROP	1	Red Maple	1
1	PROP	1	Red Maple	1
1	PROP	1	Red Maple	1
1	61	2	Yellow birch	1
Segment 1 Cumulative Existing Tree and Sapling Score				**6**
2	62	2	Quaking aspen	1
Segment 2 Cumulative Existing Tree and Sapling Score				**1**
3	63	1	Quaking aspen	1
3	64	2	Quaking aspen	1
3	65	1	Yellow birch	1
Segment 3 Cumulative Existing Tree and Sapling Score				**3**
4	70	6	Bradford pear	5
4	71	6	Bradford pear	5
4	72	7	Bradford pear	10
Segment 4 Cumulative Existing Tree and Sapling Score				**20**
5	N/A	N/A	None	0
Segment 5 Cumulative Existing Tree and Sapling Score				**0**
6	132	5	Paper birch	5
6	133	2	Paper birch	1
6	134	2	Paper birch	1
6	135	6	Paper birch	5
6	136	6	Red oak	5
6	137	14	Red oak	15
6	138	7	Paper birch	10
6	139	1	American beech	1
6	140	1	American beech	1
6	141	2	American beech	1
6	142	1	American beech	1
6	143	7	Black cherry	10
6	144	7	Paper birch	10
6	145	4	Red maple	5
6	146	3	Red maple	1
6	147	3	Red maple	1
6	148	4	Red oak	5
6	149	1	Red maple	1
Segment 6 Cumulative Existing Tree and Sapling Score				**79**
7	Outside Limit of Work – No Tree Cutting			N/A
Segment 7 Cumulative Existing Tree and Sapling Score				**N/A**

Project:
TOWN OF WARREN
NEW HAMPSHIRE

DEMOLITION OF STRUCTURES
NH-25

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SITE RESTORATION PLAN

Sheet Number:
C-103

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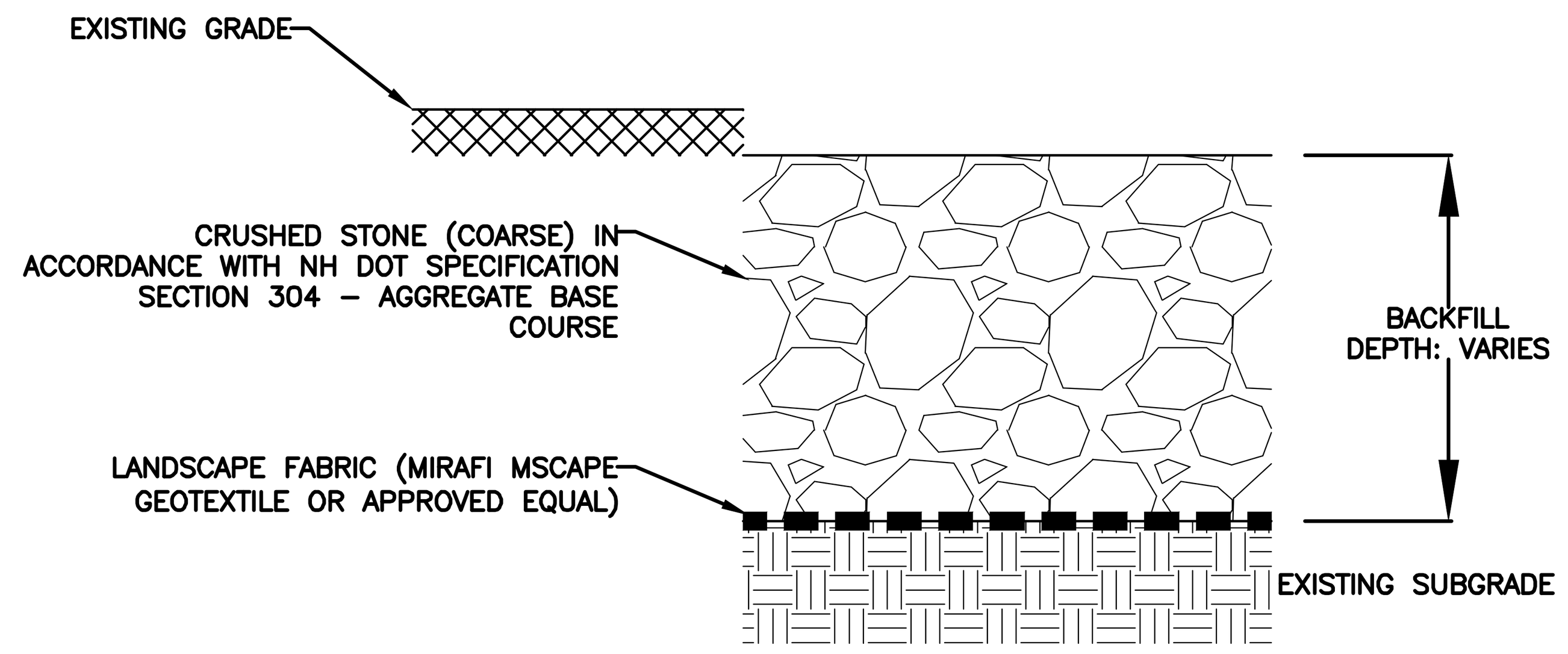
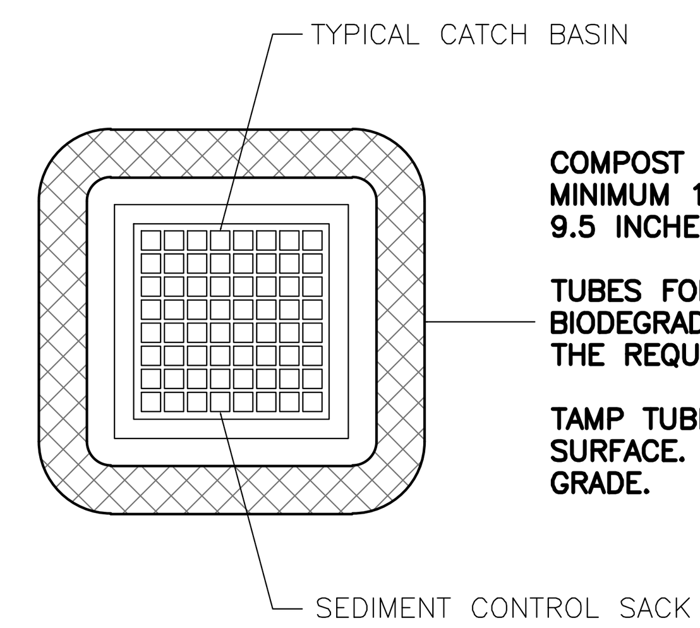


NOTE: PROVIDE POSITIVE DRAINAGE TO PREVENT PONDING

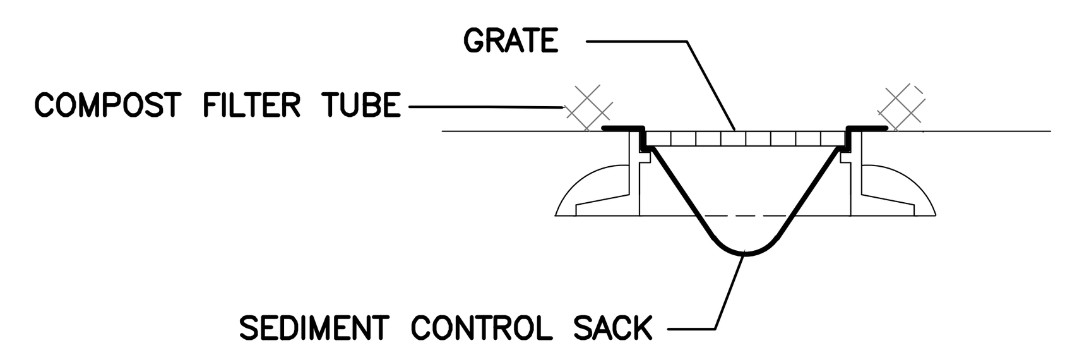
BACKFILL DETAIL
N.T.S.



COMPOST FILTER TUBE
MINIMUM 12 INCHES IN DIAMETER WITH AN EFFECTIVE HEIGHT OF 9.5 INCHES.

TUBES FOR COMPOST FILTERS SHALL BE JUTE MESH OR APPROVED BIODEGRADABLE MATERIAL. ADDITIONAL TUBES SHALL BE USED AT THE REQUIREMENT OF THE ENGINEER.

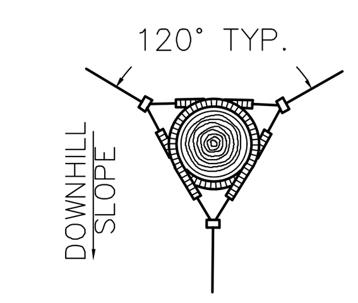
TAMP TUBES IN PLACE TO ENSURE GOOD CONTACT WITH SOIL SURFACE. IT IS NOT NECESSARY TO TRENCH TUBES INTO EXISTING GRADE.



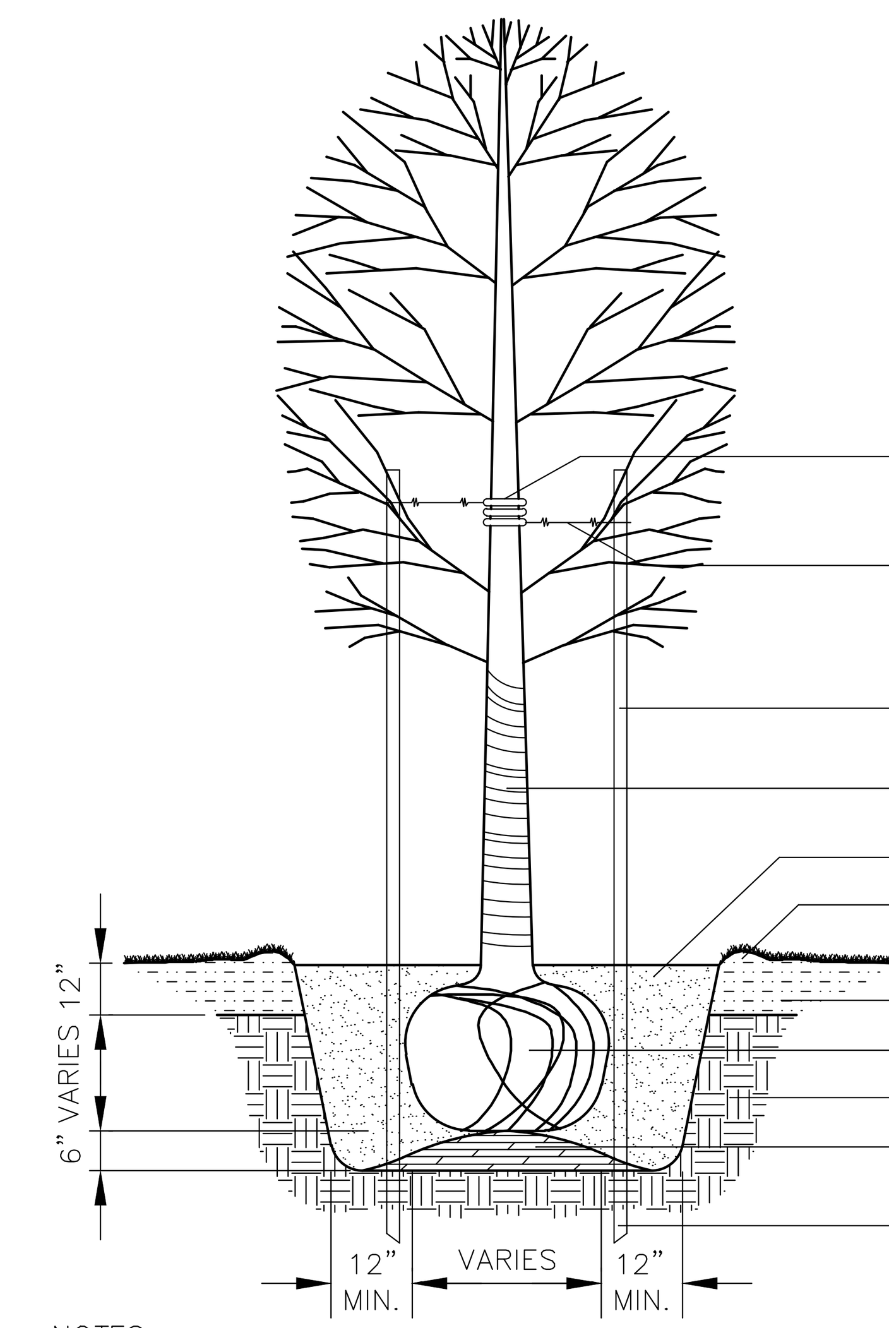
NOTES:

1. PROVIDE A MINIMUM TUBE DIAMETER OF 12 INCHES FOR SLOPES UP TO 50 FEET IN LENGTH WITH A SLOPE RATIO OF 3H:1V OR STEEPER. LONGER SLOPES OF 3H:1V MAY REQUIRE LARGER TUBE DIAMETER OR ADDITIONAL COURSING OF FILTER TUBES TO CREATE A FILTER BERM. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SITUATIONS WITH LONGER OR STEEPER SLOPES.
2. INSTALL TUBES ALONG CONTOURS AND PERPENDICULAR TO SHEET OR CONCENTRATED FLOW.
3. DO NOT INSTALL IN PERENNIAL, EPHEMERAL OR INTERMITTENT STREAMS.
4. CONFIGURE TUBES AROUND EXISTING SITE FEATURES TO MINIMIZE SITE DISTURBANCE AND MAXIMIZE CAPTURE AREA OF STORMWATER RUN-OFF.
5. WHEN STAKING IS NOT POSSIBLE, SUCH AS WHEN TUBES MUST BE PLACED ON PAVEMENT, HEAVY CONCRETE OR CINDER BLOCKS CAN BE USED BEHIND TUBES UP TO 5 FT. APART OR AS REQUIRED TO SECURE TUBES IN PLACE.
6. TUBES CAN BE PLACED DIRECTLY ON EXISTING PAVEMENT WHEN NECESSARY.
7. PROVIDE A 3 FT. MINIMUM OVERLAP AT ENDS OF TUBES TO JOIN IN A CONTINUOUS BARRIER AND MINIMIZE UNIMPEDED FLOW. STAKE JOINING TUBES SNUGLY AGAINST EACH OTHER TO PREVENT UNFILTERED FLOW BETWEEN THEM. SECURE ENDS OF TUBES WITH STAKES SPACED 18 IN. APART THROUGH TOPS OF TUBES.

CATCH BASIN PROTECTION DETAIL
N.T.S.



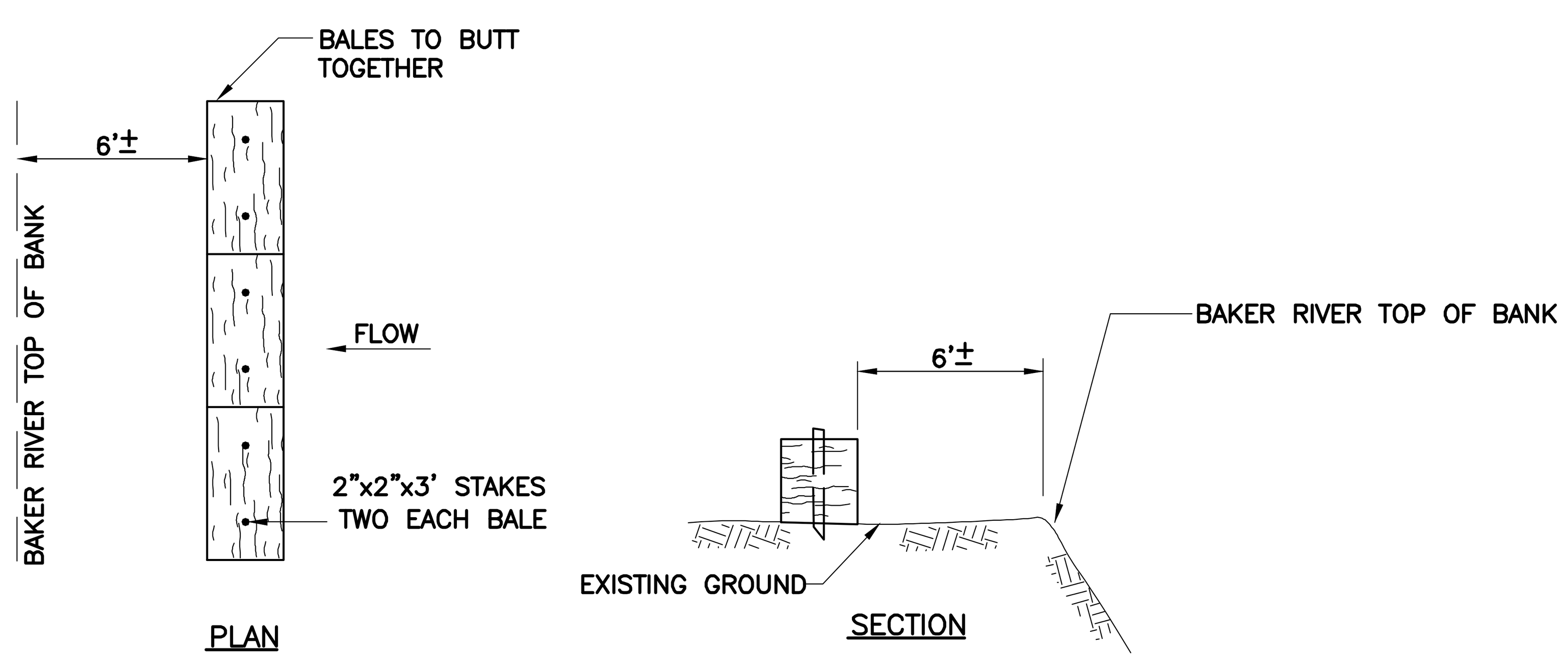
GUYING CABLE DETAIL



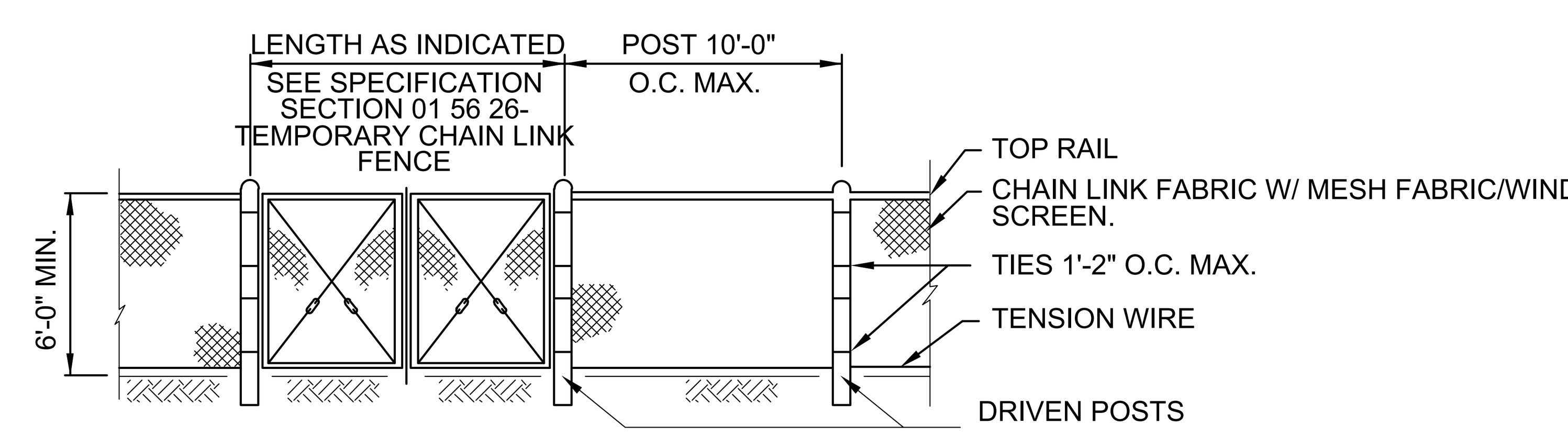
NOTES:

1. REMOVE BURLAP FROM TOP 1/3 OF BALL.
2. FOR MULTI-STEMMED TREE STAKE THREE LARGEST STEMS, AND CONNECT HOSE GUARDS WITH SINGLE WIRE STAY.

TREE PLANTING
N.T.S.



HAY BALES DETAIL
N.T.S.



NOTE:

1. SEE SHEET C-102 AND SPECIFICATION SECTION 01 53 26 - TEMPORARY CHAIN LINK FENCE.
2. FENCE POSTS SHALL BE SUITABLE FOR DRIVING INTO THE GROUND.

CHAIN LINK FENCE AND GATE DETAIL
N.T.S.

Project:
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DETAILS

Sheet Number:
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