TOWN OF

PLAINVILLE

ONE CENTRAL SQUARE, PLAINVILLE, CONNECTICUT 06062

REQUEST FOR PROPOSALS
FOR

HAZARDOUS BUILDING MATERIALS ABATEMENT
FORMER WHITE OAK PROPERTY
1 AND 63 WEST MAIN STREET PLAINVILLE, CT

RFP 2024-02

RESPONSES DUE: Thursday, July 13, 2023 at 12:00 PM

June 22, 2023

Prepared by

Tighe & Bond Inc.

Tighe&Bond

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1.0 LEGAL NOTICE

LEGAL NOTICE

REQUEST FOR PROPOSALS

The Town of Plainville, Connecticut is accepting proposals for
RFP 2024-02: HBM Abatement Former White Oak Property

June 22, 2023

The Town of Plainville, Connecticut (the "Town") is soliciting proposals from Hazardous Building Material Abatement Contractors (each a “Contractor”) to complete the abatement work specified in Appendix G Technical Specifications and shown in Appendix H Drawings. The Contractor selected (the “Awarded Contractor”) pursuant to the Request for Proposals (the “RFP”) will complete all specified abatement work.

The documents comprising the RFP are available electronically and may be obtained via email by contacting Adriano Cirioli, Assistant Town Manager at purchasing@plainville-ct.gov or at the following website: https://www.plainvillect.com/bids-rfps.

RFPs shall be submitted in the manner specified to the Town of Plainville, 1 Central Square, Plainville, CT 06062 until **12:00 PM local, eastern standard time on Thursday July 13, 2023**. Proposals will be opened publicly at this time and location.

The Town reserves the right to amend or terminate the RFP, accept or reject any or all proposals, waive any informalities or non-material deficiencies in a proposal, and issue an award to the Contractor for the proposal that, in the Town's sole discretion and judgment, will be in the Town's best interests. The Town's decision shall be final, shall not be subject to review or appeal, and may be based on any criteria in the Town's sole discretion, including but not limited to price, terms, and the relative experience and reputation of the Contractor. Abatement contractors with experience working on CT State funded projects are particularly encouraged to apply.

Any agreements shall be preceded by a notice of award and letter of intent or option agreement and, thereafter, will be contingent and non-binding until: (i) all approvals and letters of support are received from applicable local, state and federal regulatory agencies, boards and authorities; (ii) final, financeable service agreements are fully executed; and (iii) all other pertinent written documents and contracts are signed by the Town and the Awarded Contractor.

An Affirmative Action/Equal Opportunity Employer. Minority/Women's Business Enterprises are encouraged to apply. This contract is subject to State set-aside and contract compliance requirements.

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2.0 GENERAL INFORMATION

2.1 INTRODUCTION

The Town of Plainville, CT (the "Town") is soliciting proposals from hazardous building materials (HBM) abatement contractors (each a “Contractor”) to contain, remove, and dispose of HBMs identified within the buildings associated with the Former White Oak Property located at 1 and 63 West Main Street in Plainville CT. The scope of services included with this RFP is described in the Technical Specifications and Drawings attached hereto as Appendix G and Appendix H, respectively. The HBM abatement work is being conducted to prepare the building for planned renovations to be completed by a private developer. Work included under this RFP will be funded through a CT Department of Economic and Community Development Brownfields Cleanup Grant awarded to the Town of Plainville.

2.2 KEY DATES

Date	Action
Thursday, June 22, 2023	RFP Posted
Thursday, June 29, 2023 at 1:00 PM	Site Visit
Monday, July 3, 2023	Last Day to Submit Inquires
Friday, July 7, 2023	Addenda Posted
Thursday, July 13, 2023 at 12:00 PM	Response Deadline

2.3 SITES VISIT

A mandatory Site Visit for prospective Contractors will be held on Thursday June 29, 2023 at 1:00 PM. Prospective Contractors will meet at the rear of the Former White Oak property, 63 West Main Street, Plainville, CT 06062 (the Site).

The Site has existing conditions and project specific considerations that must be addressed at Contractor’s sole cost and expense. For this reason, among others, prospective Contractors are required to attend the Site Visit. The Town will not accept proposals submitted by Contractors that do not attend and sign-in at the site visit.

Contractors are required to complete and submit a Hold Harmless Agreement (Appendix B) in advance of or at the Site Visit.

2.4 INQUIRIES AND ADDENDA

Inquiries regarding this RFP must be submitted in writing and delivered by Monday, July 3, 2023 via mail or e-mail to:

Adriano Cirioli, Assistant Town Manager
Town of Plainville
1 Central Square, Plainville, CT 06062
purchasing@plainville-ct.gov

Responses to inquiries and any supplementary instructions in the form of written addenda will be posted at https://www.plainvillect.com/bids-rfps no later than Friday, July 7, 2023. It is the responsibility of the Contractor to determine whether any addenda have been issued and to ensure that all requirements of the RFP are met prior to submittal of the proposal.

Contractors are prohibited from contacting any Town employee, representative, or official or the current property owner concerning this RFP. A Contractor's failure to comply with this requirement may result in disqualification. No oral statement, including oral statements by any Town representatives, can permit a waive, change, or modify any of the provisions of this RFP, and no Contractor should rely on any such oral statement regarding this RFP.

2.5 RESPONSE DEADLINE

Responses to this RFP ("Proposals") must be received by 12:00 PM on Thursday July 13, 2023 and be addressed to:

Adriano Cirioli, Assistant Town Manager
Town of Plainville
1 Central Square, Plainville, CT 06062

2.6 SUBMISSION OF PROPOSALS

Three (3) hardcopies and one (1) digital copy (via a thumb drive) of the response to this RFP must be received at the Town of Plainville Municipal Center, 1 Central Square, Plainville, CT 06062. The sealed envelope must have the Contractor's name and address and be labeled:

DO NOT OPEN | RFP 2024-02 HBM Abatement Former White Oak Property

The Town of Plainville reserves the right to reject or accept, in whole or in part, any response and may waive any informality.

3.0 SCOPE OF SERVICES

3.1 PROJECT DESCRIPTION

The Town is soliciting proposals from HBM abatement Contractors to contain, remove, and dispose of HBMs identified within the buildings associated with the Former White Oak Property located at 1 and 63 West Main Street in Plainville CT. The scope of services included with this RFP is described in the Technical Specifications and Drawings attached hereto as Appendix G and Appendix H, respectively.

The subject property was formerly operated by White Oak Corporation as an office building and manufacturing and processing facility originally constructed in the 1920s. The subject property abuts West Main Street (Route 372) to the south, Pequabuck River to the north, and train tracks/Central Square (Town Hall) to the east. The Site includes the following structures, each of which contain HBM that must be abated as part of the scope of services included herein:

Office Building: The office building located on West Main Street is an approximately 8,500 square foot (SF) office style, two-story building with a full basement and includes two additions to the north and east of the original office building. The office building consists of brick, concrete, and wood construction. The walls consist of gypsum wallboard and two coat plaster system. Flooring consists of various layers of resilient flooring and carpet. The windows, doors and door frame are both wood and metal construction. Heat is supplied by an oil-fired furnace and provides radiant heat. The roof is flat and consists of multiple layers of built-up roofing on wood decking.

Maintenance / Machine Shop and Office: The abutting maintenance / machine shop building located north of the office building is an approximately 6,500 SF warehouse style, one-story structure used for storage and manufacturing. This shop is connected to the larger maintenance garage. The machine shop walls consist of a combination of gypsum wall board, brick, concrete, and interior one coat plaster. The floors consist of concrete. The windows, doors and door frames are metal construction. Heat is supplied by gas fired overhead unit heaters. The roof is flat and consists of multiple layers of built-up roofing on wood decking. The attached shop office located to the northwest is an approximately 2,400 SF one-story structure with office, locker room, showers, and furnace room. The walls and floor consist of gypsum wall board and two-coat plaster system. Flooring consists of various layers of resilient flooring and carpet. The windows, doors and door frame are both wood and metal construction. Heat is supplied by a gas-fired furnace and provides forced hot air through an HVAC system. The roof is flat and consists of multiple layers of built-up roofing on wood decking.

Maintenance Shop Building: The abutting maintenance shop building located north of the machine shop is an approximately 17,500 SF warehouse style, one-story structure with sublevel work bays used for vehicle maintenance and storage. A paint booth is located to the northeast corner. The maintenance shop consists of brick, concrete, and wood. The

interior walls consist of interior one-coat plaster walls, floors consist of concrete. The windows, doors and door frames are metal construction. Heat is supplied by gas-fired overhead unit heaters. The roof is flat and consists of multiple layers of built-up roofing on wood decking.

Quonset Hut Building: The quonset hut building is an approximately 8,500 SF barrel-roofed warehouse style one-story structure used for storage. This building consists of concrete, wood, and metal construction.

Quonset Hut Addition: The 13,400 SF warehouse style one-story structure was constructed adjacent to the quonset hut and is used for storage. The building consists of concrete and metal. This building was also referred to as the "Hazardous Waste Storage Building" in previous reports.

The Town has completed HBM assessment activities throughout these buildings, the findings of which were used to prepare the abatement plans that are detailed within the Technical Specifications and shown on the Drawings. Significant findings include the presence of asbestos containing materials (ACM), lead-based paints (LBP), PCB containing materials and universal and other regulated wastes all of which must be contained, abated, removed, managed, and disposed or otherwise managed in accordance with the Technical Specifications.

A review by the State Historic Preservation Office (SHPO) stated "existing windows of the White Oak Building appeared to be in good condition and contributed to the historic integrity" and is requiring the Office Building windows to "retained" and must be taken into consideration when addressing abatement plans within the Technical Specifications.

4.0 REQUIRED INFORMATION

Proposals submitted in response to this RFP must include the following information and documentation, be clear and unambiguous, and be presented in the following manner: (1) Letter of Interest, (2) Organizational History and Information, (3) Experience, (4) Project Approach, (5) State DAS Requirements for Construction Projects, (6) State Set-Aside Requirements, (7) Contract Surety, (8) Insurance, (9) Completed Fee Proposal Form, (10) Any Other Considerations, (11) Initial Disclosure Agreement, and (12) Non-Collusion Certificate.

4.1 LETTER OF INTEREST

The Letter of Interest must specify the following:

a. The Contractor's name and mailing address.
b. Name, title, email address, and telephone number of the individual(s) authorized by the Contractor to commit the company to this contract.
c. Name, title, email address, and telephone number of the individual(s) the Town should contact regarding questions and clarifications.
d. List of all owners of the Contractor and the percentage of ownership held by each.
e. The corporation name and mailing address of any proposed sub-consultants.

4.2 ORGANIZATIONAL HISTORY AND INFORMATION

In its proposal, each Contractor should Include the following information regarding its organizational history and information:

a. Provide company history, organization chart and bios (length of time with firm, key projects, work history) of key team members and subcontractors, and their capability to perform work. Please only profile individuals that will directly be working on the project.

b. Indicate whether the Contractor, any team member, or any corporate officers have been party to any lawsuit involving the type of work included in this RFP and provide a summary of the claims and status of the action.

4.3 EXPERIENCE

In its proposal, each Contractor should Include the following information regarding its experience:

a. Provide a list completed significant projects in Connecticut. Include project name, contracted project value location, role played with respect to each project (e.g., prime contractor, subcontractor, owner, etc.) and brief 2-3 sentence project description.

b. Highlight experience with municipal projects completed using Connecticut Department of Economic and Community Development grant funds.

c. Provide three (3) project references, including the contact person's name, email address, telephone number, and organization, as well as the nature of work performed, its location, and total contracted project value.

4.4 PROJECT APPROACH

Proposals shall provide the Contractor's basic understanding of the project and work required to complete the scope of services included within the RFP. Proposals shall provide details about the anticipated means and methods for abatement, anticipated disposal facilities, use of subcontractors, project duration, and any potential delays of change orders identified during preparation of the proposal.

4.5 STATE DAS REQUIREMENTS FOR CONSTRUCTION PROJECTS

Contractors shall submit with their proposals their DAS Contractor Prequalification Certificate along with a current Update Bid/RFP Statement. In addition, any named Subcontractor whose subcontract value is equal to or greater than $500,000 shall hold a current DAS Contractor Prequalification Certificate in the closest applicable Classification of the work that the Subcontractor will complete in the contract. The proposer must submit with their proposal all applicable Subcontractor DAS Prequalification certificates. Any proposal submitted without a copy of the DAS Prequalification Certificate and an Update Bid/RFP Statement for the proposer and DAS Prequalification Certificates for Subcontractors whose subcontract value is equal to or greater than $500,000 shall be invalid.

The Successful proposer and each of its Subcontractors having subcontracts in value equal to or greater than $500,000 shall maintain and keep current their respective DAS Contractor Prequalification Certificates at all times during the term of the Contract and any warranty period set forth in the Contract Documents.

The wages paid on an hourly basis to any person performing the work of any mechanic, laborer or worker on the work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such person to any employee welfare fund, as defined in subsection (i) of C.G.S section 31-53, shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the town in which such construction, remodeling, refinishing, refurbishing, rehabilitation, alteration or repair project is being undertaken. Any contractor who is not obligated by agreement to make payment or contribution on behalf of such persons to any such employee welfare fund shall pay to each mechanic, laborer or worker as part of such person's wages the amount of payment or contribution for such person's classification on each pay day.

Wage rates for this Project are subject to the minimum wage rates as per State of Connecticut Labor Department "Prevailing Wage Rates". State Prevailing Wage Rates for this project are included in Appendix F.

Contractors must comply with the requirements set forth in the State of Connecticut Department of Economic and Community Development Bidding, Contracting & Construction Guidelines for State Programs, Revised May 2019.

All Contractors must complete, sign, and return the "CHRO Contract Compliance Regulations Notification to Bidders" form to the grantee at the response deadline. Proposals not including this form will be considered incomplete and rejected. This form is attached, and can also be found at:
http://www.ct.gov/chro/lib/chro/pdf/notificationtobidders.pdf

4.6 STATE SET-ASIDE REQUIREMENTS

The contractor who is selected to perform this municipal public works project, funded in whole or part by the State, must comply with CONN. GEN. STAT. §§ 4a-60, 4a-60a, 4a-60g, and 46a-68b through 46a-68f, inclusive, as amended by June 2015 Special Session Public Act 15-5. An Affirmative Action Plan must be filed with and approved by the Commission on Human Rights and Opportunities prior to the commencement of construction.

State law requires a minimum of twenty-five (25%) percent of the state-funded portion of the contract for award to subcontractors holding current certification from the Connecticut Department of Administrative Services ("DAS") under the provisions of CONN. GEN. STAT. § 4a-60g, as amended. (25% of the work with DAS certified Small and Minority owned businesses and 25% of that work with DAS certified Minority, Women and/or Disabled owned businesses.) The contractor must demonstrate good faith effort to meet the 25% set-aside goals.

For municipal public works contracts, the contractor must file a written or electronic non-discrimination certification with the Commission on Human Rights and Opportunities. Forms can be found at:
http://www.ct.gov/opm/cwp/view.asp?a=2982&q=390928&opmNav_GID=1806.

4.7 Bid Guarantee

Each Bid shall be accompanied by a Bid Bond, or in lieu of a Bid Bond, a Certified Check for five (5%) percent of the total amount Bid. The bond shall be prepared in the form of a Bid Bond within these Specifications, duly executed by the Bidder as principal, and having as surety thereon a surety company approved by the Town of Plainville's Finance

Department. The certified check shall be payable to the Town of Plainville.

All checks and Bid Bonds, with exception of the three lowest bidders, shall be returned within ten (10) days of the awarding of the Contract. The bid deposit of the three lowest bidders shall be retained until the lowest responsible bidder has furnished the required contract security and executed the agreement. If the successful bidder fails to furnish the required security within ten (10) days of the Notice to Award or to execute the Agreement, the owner may annul the Notice of Award and the bid guarantee shall be forfeited to the owner as liquidated damages for such failure. If the successful bidder fails to execute the agreement in the time prescribe the contract shall be awarded to the second lowest responsible bidder.

4.8 PERFORMANCE BOND, LABOR, AND MATERIAL PAYMENT BONDS

Performance Bonds and Labor and Material Payment Bonds, in an amount equal to one hundred (100%) per cent of the Bid will be required from the Bidder to whom the Contract is to be awarded for faithful performance of the Contract. 5. They shall be prepared in the form of Performance Bond and Labor and Material Payment Bond attached hereto, duly executed by the Bidder as principal, and having as surety thereon a surety company approved by the Owner. These bonds shall remain in effect until one year after the project is accepted. The contractor shall be obtained from surety companies that are duly licensed or authorized in the State of Connecticut. All surety companies shall be as named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

If the Proposer is a construction manager or if a construction manager is employed, each subcontract exceeding $100,000 shall be bonded as described herein or otherwise secured by a certified check.

4.9 INSURANCE

The Contractor shall secure and maintain such insurance from an insurance company in the State of Connecticut as will protect himself, Subcontractors, and the Owner from claims of bodily injury, death or property damage which may arise from operations under this Contract. Each insurance policy shall contain a clause providing it shall not be cancelled by an insurance company without the owner receiving thirty (30) days Written Notice of the intention to cancel. The Town's insurance requirements and an insurance acknowledgement form are included in Appendix E.

Insurance must also include the following State of Connecticut requirements:

1. State of Connecticut shall be listed as additionally insured under 1. Commercial General

Liability - $1M per occurrence, 2. General Aggregate - $2M and 3. Umbrella Liability – As provided to the Town.

2. The “Hold Harmless” Indemnification endorsement of the insurance shall include the interest of the Town and the State of Connecticut. The Contractor and Subcontractors and other interests shall be so named.

4.10 COMPLETED FEE PROPOSAL FORM

Proposals shall include pricing as outlined in the Price Proposal Form included as Appendix D, inclusive of all labor, equipment, materials and any other costs associated with completion of the specified Scope of Services. This price should encompass the entire Scope of Services in this RFP. The Town reserves the right to negotiate costs, scope of services, and key personnel upon receipt of the proposals.

4.11 ANY OTHER CONSIDERATIONS

In the proposal, please list or describe any other potential benefits to the Town from your proposal that may set your firm apart from others.

4.12 INITIAL DISCLOSURE FORM

Complete and execute the Initial Disclosure Form (Appendix A). In such, each Contractor must disclose, if applicable, the following:

a. Whether it is unable or unwilling to meet any requirement of this RFP. Specific exceptions or additions should be included as an attachment to the proposal. Each Contractor should also provide copies of any agreements it will require the Town to execute in connection with its proposal (e.g., site license, tax agreement, etc.) with the understanding that the Awarded Contractor(s) will be required to compensate the Town for the costs incurred to have such agreement(s) reviewed and negotiated by outside counsel.

b. Whether it is ineligible under any applicable law or regulation to be awarded the site licenses or associated contracts for any reason.

4.13 NON-COLLUSION CERTIFICATE

Complete and execute the Non-Collusion Certificate (Appendix C).

5.0 SUBMISSION OF RESPONSES

Three (3) hardcopies and one (1) digital copy (via a thumb drive) of the response to this RFP must be received in a sealed envelope at the Town of Plainville Municipal Center. The sealed envelope must be addressed to:

Adriano Cirioli, Assistant Town Manager
Town of Plainville
1 Central Square, Plainville, CT 06062

The sealed envelope must have the Contractor's name and address and be labeled:

DO NOT OPEN | RFP 2024-02 Hazardous Building Materials Abatement White Oak Property

Responses to this RFP must be received by 12:00 PM on Thursday, July 13, 2023. Responses received after the date and time prescribed will not be considered.

The Town of Plainville reserves the right to reject or accept, in whole or in part, any response and may waive any informality.

6.0 EVALUATION AND SELECTION

6.1 EVALUATION CRITERIA

The Town could (but is not obligated to) use the following criteria, among others, in evaluating proposals:

- Proposal completeness and compliance with this RFP's requirements.
- Financial strength, and stability and industry reputation.
- HBM Abatement experience.
- Recent prior experience – in particular in Connecticut.
- Customer service and client references.
- Any other factor that the Town deems appropriate in its sole discretion.

Regardless of anything to the contrary stated herein, the Town reserves the right to select a Contractor based on factors not enumerated above at its unfettered and sole discretion.

6.2 SELECTION PROCESS

The Town will select the proposal(s) that, all things considered, the Town determines in its complete and sole discretion, is in the best interest of the Town. Although price will be an important factor, it will not be the only basis for an award. Due to the complexity of the project, the Town is not and shall not be bound to select a proposal based on any particular factor(s). Further, the Town can, at its discretion, negotiate with selected Contractor on proposal terms prior to making an award.

6.3 PROPOSAL DISQUALIFICATION

The Town will not select any proposal from a Contractor if it is in arrears or in default to the Town regarding any tax, debt, contract, security, or any other obligation, nor shall it select any Contractor if an owner thereof is in such arrears or default.

6.4 PRELIMINARY AWARD

The Town will select the proposal that it deems to be in the Town's best interests and issue a preliminary notice of award to the selected Contractor. As a State funded project, any and all proposals may be sent to the Department of Economic & Community Development for review before that preliminary notice of award is sent to the selected Contractor. The award may be subject to further discussions with the Contractor. The making of a preliminary award to a Contractor does not provide that Contractor with any rights and does not impose upon the Town any obligations. The Town is free to withdraw a preliminary award at any time and for any reason. Further, once executed, the site license agreement will be contingent and non-binding

until: (i) all approvals and letters of support are received from applicable local, state and federal regulatory agencies, boards, and authorities; (ii) final, financeable service agreements are fully executed; (iii) all contracts are reviewed and approved by the Department of Economic and Community Development; and (iv) all other pertinent written documents and contracts are signed by the Town and the Awarded Contractor(s). Neither this RFP nor any actions taken by the Town shall create any obligation toward any Contractor.

7.0 GENERAL PROVISIONS

7.1 PRESUMPTION OF CONTRACTOR'S FULL KNOWLEDGE

Each Contractor is responsible for having read and understood each document in this RFP and any addenda issued by the Town or formal responses (if any) to questions posed by other Contractors. A Contractor's failure to have reviewed all information that is part of or applicable to this RFP shall in no way relieve it from honoring any aspect of its proposal or the obligations related thereto.

Each Contractor is deemed to be familiar with and is required to comply with all local, federal and state statutes, regulations, ordinances, codes and orders, including any HBM abatement-specific rules or guidance that in any manner relate to this RFP or the performance of the work described herein.

By submitting a proposal, each Contractor represents that it has thoroughly examined and become familiar with the scope of services requested and the terms of this RFP and can perform the work to achieve the Town's objectives.

7.2 RIGHT TO AMEND OR TERMINATE THIS RFP

The Town may—in its sole discretion—clarify, modify, amend, or terminate this RFP if the Town determines that it is in the Town's best interests to do so. The Town reserves all rights to reject any or all proposals and to negotiate agreement terms and conditions in the best interests of the Town.

7.3 INTERPRETATION

Interpretation of the wording of this document shall be the sole right and responsibility of the Town and that interpretation shall be final.

7.4 COST OF PROPOSAL PREPARATION

No reimbursement will be made by the Town for any costs incurred in the preparation of a response or during the selection process.

7.5 OWNERSHIP INFORMATION

All responses submitted will be considered to be the property of the Town. All business confidential information protected from disclosure under the State of Connecticut Freedom of Information Act must be clearly identified as such.

7.6 WITHDRAWAL/TERMINATION

If any Awarded Contractor withdraws its proposal or its participation in the processes contemplated herein or if the Town terminates its relationship with any Awarded Contractor, then the Town and such Awarded Contractor hereby agree that the Town shall have the right, but not the obligation, within thirty (30) days following the withdrawal or termination to purchase any or all of the studies, applications, any surveys or professional drawings (and the electronic data) and permits received or submitted by the Awarded Contractor , at the reasonable, verifiable, third-party out-of-pocket expense incurred by the Awarded Contractor. The Awarded Contractor shall take all necessary steps with the utility or local, state, or federal board or agency to assign the rights to such permits, access rights, etc. to the Town.

7.7 FREEDOM OF INFORMATION ACT

All information submitted in a proposal or in response to a request for additional information is subject to disclosure under the state Freedom of Information Act as amended and judicially interpreted. All information submitted by Contractors in response to this RFP will not be treated as or considered confidential by the Town.

7.8 CONFLICTS OF INTEREST/CODE OF ETHICS

Awarded Contractor agrees that this RFP and/or the actions of Awarded Contractor are subject to the provisions of the Town code of ethics, if any. Should the Awarded Contractor be found to have violated the code of ethics, the Town may terminate this RFP or any ensuing agreement such as the letter of intent or option agreement or notice of award and take such other action as the Town may have at law or in equity. Awarded Contractor shall incorporate the above paragraphs into any sub-contracts or purchase orders. Awarded Contractor shall be responsible for disclosing interests and relationships that could be perceived as a possible conflict of interest under the any Town code of ethics.

7.9 EQUAL OPPORTUNITY/NON-DISCRIMINATION

Contractors must meet all municipal, state, and federal affirmative action and equal employment opportunity practices. This includes compliance with the Executive Order 11246, “Equal Employment Opportunity,” as amended by Executive Order 11375, “Amending Executive Order 11246 Relating to Equal Employment Opportunity,” and as supplemented by regulations at 41 CFR part 60, “Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor.”

7.10 DISCLAIMER

The Town makes no representation or warranty and assumes no responsibility for the accuracy of the information set forth in this RFP. Further, the Town does not warrant nor make any representations as to the quality, content, accuracy or completeness of the information, text,

graphics, links or other facet of this RFP once it has been downloaded or printed from this or any server, and hereby disclaims any liability for technical errors or difficulties of any nature that may arise in connection with the website on which this RFP is posted, or in connection with any other electronic medium utilized by Contractors or potential Contractors in connection with or otherwise related to the RFP.

7.11 CONTRACT TIMES AND LIQUIDATED DAMAGES

Time of the Essence - All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

Substantial Completion and Final Payment - The Work will be substantially completed within 120 days from the date of the Notice to Proceed and completed and ready for final payment in within 150 days from the date of the Notice to Proceed. Substantial completion shall be in accordance with the plans, project manual, and other contract documents, taking into consideration average weather conditions, availability of labor, delivery of materials, and equipment.

Liquidated Damages - Contractor and Owner recognize that time is of the essence as stated in above and that Owner will suffer financial and other losses if the Work is not completed within the times specified above, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

A. Substantial Completion: Contractor shall pay Owner $500 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion until the Work is substantially complete.

B. Completion of Remaining Work after Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time (as duly adjusted pursuant to the Contract), for completion and readiness for final payment, Contractor shall pay Owner $500 for each day that expires after such time until the Work is completed and ready for final payment.

C. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.

APPENDIX A: INITIAL DISCLOSURE FORM

1. **Exceptions to this RFP (please check the one that applies)**

   _____ This proposal does not take exception to any requirement of this RFP.

   _____ This proposal does take exception to requirements of this RFP. The specific exceptions are listed in a separate attachment.

2. **Occupational Safety and Health Law Violations**

   Has the Contractor or any firm, corporation, partnership or association in which it has an interest (1) been cited for three (3) or more willful or serious violations of any occupational safety and health act or of any standard, order or regulation promulgated pursuant to such act (provided such violations were cited in accordance with the provisions of any state occupational safety and health act or the Occupational Safety and Health Act of 1970, and not abated within the time fixed by the citation and such citation has not been set aside following appeal to the appropriate agency or court having jurisdiction) or (2) received one or more criminal convictions related to the injury or death of any employee at any time preceding the proposal?

   _____ Yes

   _____ No

   If "yes," attach a sheet fully describing each such matter.

3. **Criminal Proceedings**

   Has the Contractor or any of its principals (regardless of the place of employment) ever been the subject of any criminal proceedings?

   _____ Yes

   _____ No

   If "yes," attach a sheet fully describing each such matter.

4. **Ethics and Offenses in Public Projects or Contracts**

   Has the Contractor or any of its principals (regardless of the place of employment) ever been found to have violated any state or local ethics law, regulation, ordinance, code, policy or standard or to have committed any other offense arising out of the submission of proposals or the performance of work on public works projects or contracts?

   _____ Yes

   _____ No

If "yes," attach a sheet fully describing each such matter.

5. Obligations to Town

Is the Contractor or any of its owners in arrears or in default to the Town regarding any tax, debt, contract, security, or any other obligation?

_____ Yes

_____ No

If "yes," attach a sheet fully describing each such matter.

Company Name: _____

Signature: _____

By: _____

Its: _____

* The signatory must be an authorized representative of the Contractor with full knowledge, power, and authority to execute this Disclosure Form

APPENDIX B: HOLD HARMLESS AGREEMENT

THIS AGREEMENT, made this _____ day of _____ by and between THE TOWN OF PLAINVILLE, a municipality in the County of Hartford and State of Connecticut and the Estate of Roger L. Toffolon, including said estate's representatives, agents, and assigns, and firms, specifically _____ (hereinafter referred to as "Survey Firm").

WITNESSETH:

WHEREAS, the development firm have interest in conducting a walk through of the White Oak Property, located at 1 & 63 West Main Street, Plainville, Connecticut ("the premises");

WHEREAS, both the Town of Plainville and the Estate of Roger L. Toffolon having agreed to conduct a walk-through of the premises for the benefit of said survey firm(s) to allow said survey firm(s) to inspect and have temporary access to the property to assist them in their business.

WHEREAS, both the Town of Plainville and the Estate of Roger L. Toffolon, along with its representatives, agents, and assigns, hereby provide notice to said survey firm(s) that the premises was recently vandalized and that there are numerous obstructions on the premises, including, but not limited two, misplaced and damaged ceiling tiles, discarded paper, misplaced boxes, and office goods which are scattered about the premises and which said obstructions could present a hazard to individuals during the walk through.

NOW THEREFORE, in consideration of mutual promises hereinafter contained, it is agreed that the survey firm(s) shall hold harmless the Town of Plainville along with the Estate of Roger L. Toffolon, its representatives, agents, and assigns, for any injuries and/or damage sustained by the members of the survey firm(s) or any claims arising from said walk through as the parties acknowledge the conditions of the property as described above. Said survey firm(s) do hereby irrevocably and unconditionally release, discharge, and hold harmless the Town of Plainville and the Estate of Roger L. Toffolon, its representatives, agents, and assigns, all Claims against them, including but not limited to, all Claims arising under any federal, state or local law, common law, public policy, statute or otherwise, from liability arising from the incident, accident or occurrence that may occur during walk through of the property on the date noted above.

_____
(Survey Firm Representative Name)

Signature: _____

By: _____

Its: _____

* The signatory must be an authorized representative of the Contractor with full power and authority to execute this Hold Harmless Agreement

APPENDIX C: NON-COLLUSION CERTIFICATE

The undersigned Contractor acknowledges and agrees that the attached proposal submitted by the Contractor is submitted in connection with the containment, abatement, removal and disposal of hazardous building materials as specified at the Former White Oak property located at 1 and 63 West Main Street in Plainville, CT. By submission of this proposal, each Contractor and each person signing on behalf of any Contractor certifies, and in the case of a joint solicitation, each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:

The proposal is genuine; it is not a collusive or sham proposal;

The Contractor developed the proposal independently and submitted it without collusion with, and without any agreement, understanding, communication or planned common course of action with, any other person or entity designed to limit independent competition;

The Contractor, its employees and agents have not communicated the contents of the proposal to any person not an employee or agent of the Contractor and will not communicate the proposal to any such person prior to the official opening of the proposal.

No attempt has been made or will be made by the Contractor to induce any other person, partnership or corporation to submit or not to submit a proposal; and

No elected or appointed official or other officer or employee of the Town of Plainville is directly or indirectly financially interested in the Contractor's proposal, or in the supplies, materials, equipment, work or labor to which it relates, or in any of the profits thereof, nor to the Contractor's knowledge has any elected or appointed official, officer or employee of the Town violated any rule, law or regulation, including local and state ethics rules, as concerns the proposal.

The undersigned Contractor further acknowledges that this certificate is executed for the purpose of inducing the Town to consider its proposal and make an award in accordance therewith.

In compliance with this RFP, and subject to the conditions thereof, the undersigned offers and agrees that the Town may rely upon both the within representations and the indemnifications set forth within the hold harmless agreement attached hereto.

[SIGNATURE PAGE FOLLOWS]

Company Name: _____

Signature: _____

By: _____

Its: _____

* The signatory must be an authorized representative of the Contractor with full knowledge, power and authority to execute this Non-Collusion Certificate
Subscribed and sworn to before me this ____ day of _____, 2023.

_____
Notary Public
My Commission Expires:

APPENDIX D: FEE PROPOSAL FORM

HAZARDOUS BUILDING MATERIALS ABATEMENT
FORMER WHITE OAK PROPERTY
1 AND 63 WEST MAIN STREET PLAINVILLE, CT

RFP 2024-02

Date: _____
Mr. Adriano Cirioli
Assistant Town Manager
Town of Plainville
1 Central Square
Plainville, CT 06062
In accordance with The Request for Proposal, the Undersigned,

_____
(Print or Type Company/Corporate Name)

_____
(Print or Type Business Address)

_____
having carefully examined all the Bid Documents, together with all Addenda, as acknowledged herein, proposes and agrees, if this Proposal is accepted, to enter into an Agreement with Owner to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Proposal and in accordance with the other terms and conditions of the Bidding Documents.

Bidder proposes to furnish all labor and materials required to complete the "Hazardous Building Materials Abatement, Former White Oak Property, Town RFP #2024-02" in accordance with the accompanying Bidding Documents prepared by Tighe & Bond, Inc., for the Contract Price specified below, subject to additions and deductions according to the terms of the Bidding Documents.

This Bid includes Addenda numbered _____.

The proposed Contract Price (base bid) is:

_____
dollars (words)

($_____)
(figures)

[Bid Items set out on following page(s)]

Bid Items

Base Bid Item Number	Item Name and Unit Prices Written in Words and Figures	Estimated Quantity	Total Amount of Items (in figures)
1	Mobilization and demobilization, per lump sum, the price of: _____ ($)	lump sum* = *Not to exceed 5% of the total Bid price	$_____
2	Temporary barriers, construction facilities, and general conditions for project duration, per lump sum, the price of: _____ ($)	lump sum =	$_____
3	Remove and dispose of all Universal and other regulated building and other wastes as specified in Section 13283, per lump sum, the price of: _____ ($)	lump sum =	$_____
4	Remove and dispose of all asbestos-containing materials (ACM) as specified in Section 13281 and shown on the Drawings, per lump sum, the price of: _____ ($)	lump sum =	$_____
5	Full component removal and disposal of PCB-containing (<50 ppm) painted walls and ceilings, window systems, door systems, equipment, trim/baseboards, and any other items or materials, as specified in Section 13286 and shown on the Drawings. Dispose of waste as CTDEEP Regulated PCB Waste, per lump sum, the price of: _____ ($)	lump sum =	$_____

Base Bid Item Number	Item Name and Unit Prices Written in Words and Figures	Estimated Quantity	Total Amount of Items (in figures)
6	Removal and disposal of PCB-containing (<50 ppm) interior paint on walls, ceilings, columns, and foundation within the Office Building Basement, as specified in Section 13286 and shown on the Drawings. Dispose of waste as CTDEEP Regulated PCB Waste, per lump sum, the price of: _____ ($)	lump sum =	$_____
7	Full component removal and disposal of PCB-containing painted exterior window systems located on the office building second floor. Materials contain PCBs ≥50 ppm and must be managed and disposed of as EPA/TSCA Regulated PCB Bulk Product Waste, per lump sum, the price of: _____ ($)	lump sum =	$_____
8	Spot removal (and/or drilling) and disposal of PCB-containing (≥50 ppm) interior steel beam paint and/or exterior façade paint (on stucco) as directed at multiple locations by Engineer. Dispose of waste as Assumed CTDEEP/EPA Regulated PCB Bulk Product Waste, per lump sum, the price of: _____ ($)	100 Square Feet =	$_____
Total Bid Price Base Bid Line Items, the price of: _____ ($)			$_____

In the event of mathematically incorrect calculations of individual items or totals, the mathematically correct amount as determined by the Town shall be used to determine the

TOTAL BID PRICE.

Approximate or estimated quantities included in the Specifications and shown on the Drawings are provided to establish an order of magnitude for the amount of material that must be abated. Actual quantities may vary. It is the sole responsibility of the Contractor to visit the site, review the Contract Documents and determine the quantities of materials to be removed when developing their Bid.

THE UNDERSIGNED ACKNOWLEDGES AND AGREES THAT ANY QUANTITIES INDICATED OR OTHERWISE PROVIDED ARE FOR BID COMPARISON PURPOSES ONLY AND ARE NOT IN FACT OR IN ANY WAY REPRESENTED TO BE ACTUAL QUANTITIES FOR COMPLETION OF THE WORK.

BIDDER: *[Indicate correct name of bidding entity]*

_____

By:
[Signature] _____

[Printed name] _____
(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:
[Signature] _____

[Printed name] _____

Title: _____

Submittal Date: _____

Address for giving notices:

_____

_____

Telephone Number: _____

Fax Number: _____

Contact Name and e-mail address: _____

_____

Bidder's License No.: _____
(where applicable)

APPENDIX E: INSURANCE REQUIREMENTS

Insurance Requirements-Town of Plainville

Contractor shall agree to maintain in force at all times during the contract the following minimum coverages and shall name Town of Plainville as an Additional Insured on a primary and non-contributory basis to all policies, except Workers Compensation. All policies should also include a Waiver of Subrogation.

Insurance shall be written with Carriers approved in the State of Connecticut and with a minimum AM Best's Rating of "A-" VIII. In addition, all Carriers are subject to approval by Town of Plainville.

		(Minimum Limits)
General Liability	Each Occurrence	$1,000,000
	General Aggregate	$3,000,000
	Products/Completed Operations Aggregate	$3,000,000
Umbrella (Excess Liability)	Each Occurrence	$1,000,000
	Aggregate	$1,000,000

If any policy is written on a "Claims Made" basis, the policy must be continually renewed for a minimum of two (2) years from the completion date of this contract. If the policy is replaced and/or the retroactive date is changed, then the expiring policy must be endorsed to extend the reporting period for claims for the policy in effect during the contract for two (2) years from the completion date.

Workers' Compensation and	WC Statutory Limits	
Employers' Liability	EL Each Accident	$500,000
	EL Disease Each Employee	$500,000
	EL Disease Policy Limit	$500,000

Original, completed Certificates of Insurance must be presented to Town of Plainville prior to contract issuance. Contractor agrees to provide replacement/renewal certificates at least 30 days prior to the expiration date of the policies. Should any of the above described policies be cancelled, limits reduced or coverage altered, 30 days written notice must be given to the Town.

APPENDIX F: State of Connecticut Wage Rate Documentation

Minimum Rates and Classifications for Building Construction

ID#: 23-49125

Connecticut Department of Labor
Wage and Workplace Standards Division

By virtue of the authority vested in the Labor Commissioner under provisions of Section 31-53 of the General Statutes of Connecticut, as amended, the following are declared to be the prevailing rates and welfare payments and will apply only where the contract is advertised for bid within 20 days of the date on which the rates are established. Any contractor or subcontractor not obligated by agreement to pay to the welfare and pension fund shall pay this amount to each employee as part of his/her hourly wages.

Project Number: 2024-02 Project Town: Plainville
State#: FAP#:
Project: Hazardous Building Materials Abatement Former White Oak Property

CLASSIFICATION	Hourly Rate	Benefits
1b) Asbestos/Toxic Waste Removal Laborers: Asbestos removal and encapsulation (except its removal from mechanical systems which are not to be scrapped), toxic waste removers, blasters.**See Laborers Group 7**		
1c) Asbestos Worker/Heat and Frost Insulator	45.56	32.65
2) Boilermaker	45.21	29.05
3a) Bricklayer, Cement Mason, Concrete Finisher (including caulking), Stone Masons	39.4	34.62 + a
3b) Tile Setter	37.1	30.52
3c) Tile and Stone Finishers	30.0	25.30
3d) Marble & Terrazzo Finishers	31.07	24.23
3e) Plasterer	42.77	29.63

------LABORERS------

As of: June 12, 2023

4) Group 1: General laborers, carpenter tenders, concrete specialists, wrecking laborers and fire watchers.	33.5	25.59
4) Group 1a: Acetylene Burners (Hours worked with a torch)	34.5	25.59
4a) Group 2: Mortar mixers, plaster tender, power buggy operators, powdermen, fireproofer/mixer/nozzleman (Person running mixer and spraying fireproof only).	33.75	25.59
4b) Group 3: Jackhammer operators/pavement breaker, mason tender (brick), mason tender (cement/concrete), forklift operators and forklift operators (masonry).	34.0	25.59
4c) **Group 4: Pipelayers (Installation of water, storm drainage or sewage lines outside of the building line with P6, P7 license) (the pipelayer rate shall apply only to one or two employees of the total crew who primary task is to actually perform the mating of pipe sections) P6 and P7 rate is $26.80.	34.5	25.59
4d) Group 5: Air track operator, sand blaster and hydraulic drills.	34.25	25.59
4e) Group 6: Blasters, nuclear and toxic waste removal.	36.5	25.59
4f) Group 7: Asbestos/lead removal and encapsulation (except it's removal from mechanical systems which are not to be scrapped).	36.5	25.59
4g) Group 8: Bottom men on open air caisson, cylindrical work and boring crew.	31.78	25.59
4h) Group 9: Top men on open air caisson, cylindrical work and boring crew.	31.24	25.59
4i) Group 10: Traffic Control Signalman	20.1	25.59
4j) Group 11: Toxic Waste Removers A or B With PPE	36.5	25.59

As of: June 12, 2023

5) Carpenter, Acoustical Ceiling Installation, Soft Floor/Carpet Laying, Metal Stud Installation, Form Work and Scaffold Building, Drywall Hanging, Modular-Furniture Systems Installers, Lathers, Piledrivers, Resilient Floor Layers.	37.61	27.61
5a) Millwrights	38.02	28.41
6) Electrical Worker (including low voltage wiring) (Trade License required: E1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9)	42.6	33.21+3% of gross wage
7a) Elevator Mechanic (Trade License required: R-1,2,5,6)	61.42	37.335+a+b
-----LINE CONSTRUCTION----		
Groundman	26.5	6.5% + 9.00
Linemen/Cable Splicer	48.19	6.5% + 22.00
8) Glazier (Trade License required: FG-1,2)	41.18	24.70 + a
9) Ironworker, Ornamental, Reinforcing, Structural, and Precast Concrete Erection	42.37	40.02 + a
----OPERATORS----		
Group 1: Crane Handling or Erecting Structural Steel or Stone; Hoisting Engineer (2 drums or over). (Trade License Required)	52.78	27.80 + a
Group 1a: Front End Loader (7 cubic yards or over); Work Boat 26 ft. and Over	48.37	27.80 + a
Group 2: Cranes (100 ton rate capacity and over); Bauer Drill/Caisson. (Trade License Required)	52.41	27.80 + a

As of: June 12, 2023

Group 2a: Cranes (under 100 ton rated capacity).	51.51	27.80 + a
Group 2b: Excavator over 2 cubic yards; Pile Driver ($3.00 premium when operator controls hammer)	48.0	27.80 + a
Group 3: Excavator; Gradall; Master Mechanic; Hoisting Engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power of operation), Rubber Tire Excavator (Drott-1085 or similar);Grader Operator; Bulldozer Finegrade. (slopes, shaping, laser or GPS, etc.). (Trade License Required)	47.1	27.80 + a
Group 4: Trenching Machines; Lighter Derrick; CMI Machine or Similar; Koehring Loader (Skooper); Goldhofer.	46.64	27.80 + a
Group 5: Specialty Railroad Equipment; Asphalt Spreader, Asphalt Reclaiming Machine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24 mandrel).	45.92	27.80 + a
Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller.	45.92	27.80 + a
Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).	45.55	27.80 + a
Group 7: Asphalt Roller; Concrete Saws and Cutters (ride on types); Vermeer Concrete Cutter; Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24" and under mandrel).	45.14	27.80 + a
Group 8: Mechanic; Grease Truck Operator; Hydroblaster; Barrier Mover; Power Stone Spreader; Welding; Work Boat Under 26 ft.; Transfer Machine; Rigger Foreman.	44.67	27.80 + a
Group 9: Front End Loader (under 3 cubic yards); Skid Steer Loader regardless of attachments; (Bobcat or Similar); Forklift, Power Chipper; Landscape Equipment (including Hydroseeder); Vacuum Excavation Truck and Hydrovac Excavation Truck (27 HG pressure or greater).	44.14	27.80 + a

As of: June 12, 2023

Group 10: Vibratory hammer; ice machine; diesel and air, hammer, etc.	41.69	27.80 + a
Group 11: Conveyor, earth roller, power pavement breaker (whiphammer), robot demolition equipment.	41.69	27.80 + a
Group 12: Wellpoint Operator.	41.61	27.80 + a
Group 13: Compressor Battery Operator.	40.92	27.80 + a
Group 14: Elevator Operator; Tow Motor Operator (solid tire no rough terrain).	39.54	27.80 + a
Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.	39.06	27.80 + a
Group 16: Maintenance Engineer.	38.28	27.80 + a
Group 17: Portable Asphalt Plant Operator; Portable Crusher Plant Operator; Portable Concrete Plant Operator; Portable Grout Plant Operator; Portable Water Filtration Plant Operator.	43.46	27.80 + a
Group 18: Power Safety Boat; Vacuum Truck; Zim Mixer; Sweeper; (Minimum for any job requiring a CDL license); Rigger; Signalman.	40.54	27.80 + a
------PAINTERS (Including Drywall Finishing)------		
10a) Brush and Roller	37.62	24.70
10b) Taping Only/Drywall Finishing	38.37	24.70
10c) Paperhanger and Red Label	38.12	24.70
10e) Blast and Spray	40.62	24.70

As of: June 12, 2023

11) Plumber (excluding HVAC pipe installation) (Trade License required: P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2)	48.28	35.50
12) Well Digger, Pile Testing Machine	37.26	24.05 + a
13) Roofer (composition)	41.2	23.85
14) Roofer (slate & tile)	41.7	23.85
15) Sheetmetal Worker (Trade License required for HVAC and Ductwork: SM-1,SM-2,SM-3,SM-4,SM-5,SM-6)	40.89	41.72
16) Pipefitter (Including HVAC work) (Trade License required: S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4, G-1, G-2, G-8 & G-9)	48.28	35.50
------TRUCK DRIVERS------		
17a) 2 Axle, Helpers	32.16	30.51 + a
17b) 3 Axle, 2 Axle Ready Mix	32.27	30.51 + a
17c) 3 Axle Ready Mix	32.33	30.51 + a
17d) 4 Axle	32.39	30.51 + a
17e) 4 Axle Ready Mix	32.44	30.51 + a
17f) Heavy Duty Trailer (40 Tons and Over)	34.66	30.51 + a

As of: June 12, 2023

17g) Specialized Earth Moving Equipment (Other Than Conventional Type on-the-Road Trucks and Semi-Trailers, Including Euclids)	32.44	30.51 + a
17h) Heavy Duty Trailer up to 40 tons	33.39	30.51 + a
17i) Snorkle Truck	32.54	30.51 + a
18) Sprinkler Fitter (Trade License required: F-1,2,3,4)	47.55	32.27 + a
19) Theatrical Stage Journeyman	25.76	7.34

Welders: Rate for craft to which welding is incidental.

**Note: Hazardous waste removal work receives additional $1.25 per hour for truck drivers.*

***Note: Hazardous waste premium $3.00 per hour over classified rate*

Crane with 150 ft. boom (including jib) - $1.50 extra
Crane with 200 ft. boom (including jib) - $2.50 extra
Crane with 250 ft. boom (including jib) - $5.00 extra
Crane with 300 ft. boom (including jib) - $7.00 extra
Crane with 400 ft. boom (including jib) - $10.00 extra

All classifications that indicate a percentage of the fringe benefits must be calculated at the percentage rate times the "base hourly rate".

Apprentices duly registered under the Commissioner of Labor's regulations on "Work Training Standards for Apprenticeship and Training Programs" Section 31-51-d-1 to 12, are allowed to be paid the appropriate percentage of the prevailing journeymen hourly base and the full fringe benefit rate, providing the work site ratio shall not be less than one full-time journeyperson instructing and supervising the work of each apprentice in a specific trade.

The Prevailing wage rates applicable to this project are subject to annual adjustments each July 1st for the duration of the project.
Each contractor shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.
It is the contractor's responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's website.
The annual adjustments will be posted on the Department of Labor's Web page: www.ct.gov/dol. For those without internet access, please contact the division listed below.
The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project.
All subsequent annual adjustments will be posted on our Web Site for contractor access.
Contracting Agencies are under no obligation pursuant to State labor law to pay any increase due to the annual adjustment provision.

Effective October 1, 2005 - Public Act 05-50: any person performing the work of any mechanic, laborer, or worker shall be paid prevailing wage

As of: June 12, 2023

All Person who perform work ON SITE must be paid prevailing wage for the appropriate mechanic, laborer, or worker classification.

All certified payrolls must list the hours worked and wages paid to All Persons who perform work ON SITE regardless of their ownership i.e.: (Owners, Corporate Officers, LLC Members, Independent Contractors, et. al)

Reporting and payment of wages is required regardless of any contractual relationship alleged to exist between the contractor and such person.

~~Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clause (29 CFR 5.5 (a) (1) (ii)).

Please direct any questions which you may have pertaining to classification of work and payment of prevailing wages to the Wage and Workplace Standards Division, telephone (860)263-6790.

As of: June 12, 2023

As of: June 12, 2023

APPENDIX G: Technical Specifications

SECTION 01110

SUMMARY OF WORK

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Work of the Contract is shown and described in Drawings and Project Manual entitled:

Hazardous Building Materials Abatement
Former White Oak Property
1 and 63 West Main Street
Plainville, Connecticut

Tighe & Bond, Inc.
Consulting Engineers
Middletown, Connecticut

2. The Work includes the following major items:

a. Abatement and disposal of friable and non-friable asbestos containing building materials, polychlorinated biphenyls (PCBs) containing building materials with concentrations <50 and ≥50 parts per million (ppm), lead-based paints, Universal and other regulated wastes, and other hazardous building materials located within the following structures.

1) Office Building

2) Machine Shop and Office

3) Maintenance Garage

4) Quonset Hut and Quonset Hut Addition

b. Remove and dispose of materials located at the site where noted on the drawings and in accordance with requirements indicated on Drawings and in Specifications.

c. Disconnecting existing utilities including, but not limited to, water, electricity, and natural gas as needed to facilitate the work. This includes coordination with individual utility companies and the Town as required.

1.2 SUBMITTALS

A. Informational Submittals

1. Submit copies of permits or approvals required for the Work, prior to initiating the Work.

1.3 EXISTING BUILDING DESCRIPTIONS

A. Office Building - The office building located on West Main Street is an approximately 8,500 square foot (SF) office style, two-story building with full basement and includes two additions to the north and east of the original office building. The office building consists of brick, concrete, and wood construction. The walls consist of gypsum wall board and two coat plaster system. Flooring consists of various layers of resilient flooring and carpet. The windows, doors and door frames are both wood and metal construction. Heat is supplied by an oil-fired furnace and provides radiant heat. The roof is flat and consist of multiple layers of built-up roofing on wood decking.

B. Machine Shop and Office - The abutting machine shop building located north of the office building is an approximately 6,500 SF warehouse style, one-story structure used for storage and manufacturing. This shop is connected to the larger maintenance garage. The machine shop walls consist of a combination of gypsum wall board, brick, concrete, and interior one coat plaster. Floors consist of concrete. The windows, doors and door frames are metal construction. Heat is supplied by gas fired overhead unit heaters. The roof is flat and consists of multiple layers of built-up roofing on wood decking. The attached shop office located to the northwest is an approximately 2,400 SF one-story structure with office, locker room, showers, and furnace room. The walls and floor consist of gypsum wall board and two-coat plaster system. Flooring consists of various layers of resilient flooring and carpet. The windows, doors and door frame are both wood and metal construction. Heat is supplied by a gas-fired furnace and provides forced hot air through an HVAC system. The roof is flat and consist of multiple layers of built-up roofing on wood decking.

C. Maintenance Shop Building - The abutting maintenance shop building located north of the machine shop is an approximately 17,500 SF warehouse style, one-story structure with sublevel work bays used for vehicle maintenance and storage. A paint booth is located to the northeast corner. The maintenance shop consists of brick, concrete, and wood. The interior walls consist of interior one-coat plaster walls, floors consist of concrete. The windows, doors and door frames are metal construction. Heat is supplied by gas-fired overhead unit heaters. The roof is flat and consists of multiple layers of built-up roofing on wood decking.

D. Quonset Hut Building and Quonset Hut Addition - The two warehouse style one-story structures are located behind the Office Building and are used for storage. The buildings consist of concrete and metal.

1.4 PROJECT/SITE CONDITIONS

A. Permits

1. Obtain the permits and approvals listed below:

a. Provide notice of abatement activities to Connecticut Department of Public Health and EPA NESHAP Coordinator a minimum of 10 working days prior to the start of work.

b. Permits and licenses of a temporary nature necessary to perform the Work.

c. Permits for legal disposal of construction wastes

d. Permits and approvals for legal disposal of asbestos, PCB, lead, and other hazardous building materials and other wastes.

e. Other permits or licenses required for the Contractor's operations or required elsewhere in the Contract Documents and not included herein.

2. Obtain required time extensions to permits obtained by the Contractor, if construction authorized by permits has not been completed by the expiration date noted on these permits.

3. Permits may require that a representative of the permitting authority or the Owner be present on-site during construction or given the opportunity to observe conditions prior to proceeding with construction. Notify the Owner, Engineer, and the permitting authority prior to performing Work that is governed by the permit.

4. Obtain permits and approvals from appropriate jurisdictional agencies and property owners for use of premises not furnished by the Owner, and for all off-site areas.

5. Submit copies of permits prior to performance of Work authorized by permits.

B. Existing Conditions

1. Use of Premises and Off-site Work

a. The Work shall occur on the Owner's property and temporary easements obtained by the Owner (if any) within the limits of Work shown on the Drawings.

b. Obtain permits and approvals for use of any land and access thereto that is deemed necessary for the Work, where such land is not available for use by the Owner, including land for temporary construction facilities, access and egress, or for storage of materials. Confine apparatus and storage to such additional areas.

c. Obtain permits and written approvals from appropriate jurisdictional agencies for the use of premises not available for use by the Owner, including all offsite staging areas, borrow pits and waste areas. Submit copies of all permits and approvals to the Owner prior to using areas.

d. Provide for the disposal of waste materials off-site in accordance with all applicable laws.

e. Adhere to the limits of Work as indicated, to minimize obstruction to traffic and inconvenience to the Owner, general public, and businesses in the vicinity of the Work, and to protect people and property. Keep fire hydrants on or adjacent to the Work accessible to fire fighting equipment at all times.

f. Make temporary provisions for the use of sidewalks and maintain functioning gutters, stormwater systems, drainage ditches, and culverts.

g. Maintain public access to businesses and residences including driveways and parking lots at all times during the Work.

PART 2 PRODUCTS

2.1 MATERIALS FURNISHED BY OWNER

A. The Owner will not furnish any materials, labor or equipment under this Contract.

2.2 SITE SIGN MATERIALS

A. General: Provide new materials. Undamaged, previously used materials in serviceable condition may be used if approved by the Engineer. Provide materials suitable for use intended.

1. Sign Panel: Plywood, APA rated A-B grade – Exterior, 3/4 inch thick.

a. Minimum Size: 4-feet by 8-feet.

2. Posts: Pressure-treated, southern yellow pine.

a. Size: 4-inch by 4-inch.

3. Fasteners: Galvanized steel nuts, bolts and washers.

a. Size: 5/16 inch.

4. Finish: Good grade of outdoor enamel paint.

a. Two coats of white oil base undercoat primer on all sides.

b. One finish coat of white on sign face.

5. Design of sign face is provided in Attachment A at the end of this Specification.

PART 3 EXECUTION

3.1 SITE SIGN INSTALLATION

A. Erect sign at location designated by Owner and Engineer.

1. Refer to Attachment A for site sign specifications.

2. Install sign where designated to inform public and persons seeking entrance to Project. Do not permit installation of unauthorized signs.

a. Engage an experienced sign painter to apply graphics for Project identification sign.

b. Secure sign with 4 bolts per post.

c. Paint sign panel and applied graphics with exterior-grade alkyd gloss enamel over exterior primer.

3. Install posts vertically to a minimum depth of 3 feet. Install top of sign level at a minimum distance of 8 feet above grade.

B. Maintain sign throughout construction

C. Remove and dispose of sign at completion of construction, when directed by the Engineer.

END OF SECTION

ATTACHMENT A

PROJECT SIGN – ECONOMIC & COMMUNITY DEVELOPMENT

8’-0”

4’-0”

Connecticut

HAZARDOUS BUILDING MATERIALS ABATEMENT
FORMER WHITE OAK PROPERTY
Constructed in cooperation with the

STATE OF CONNECTICUT
NED LAMONT, GOVERNOR

Department of Economic and Community Development
Alexandra Daum, Commissioner
and the

TOWN OF PLAINVILLE
Mr. Michael T. Paulhus, Town Manager

Tighe & Bond, Licensed Environmental Professional

General Contractor

Environmental Clean-Up in Progress at this Site. For further information contact:
Town of Plainville, Economic Development Coordinator Cal Hauburger, Phone 860-793-0221

SIGN PANEL: ¾” MDO-EXT-APA PLYWOOD SUPPORTED WITH (2) 4X4 TREATED WOOD COLUMNS AND SECURED 4’ INTO GRADE. TOP OF SIGN AT 8’-0” ABOVE GRADE.

COLORS: ALL LETTERS AND SYMBOLS ARE TO BE ROYAL BLUE. THE BACKGROUND WILL BE WHITE ENAMEL. BACK OF PLYWOOD AND SUPPORT STRUCTURE SHALL BE PAINTED MATTE BLACK.

TYPEFACE: HELVETICA MEDIUM

LOCATION: SIGN MUST BE LOCATED TO BE CLEARLY VISIBLE TO THE PUBLIC.

TIMING: INSTALL AT THE START OF CONSTRUCTION AND REMOVE AT CONSTRUCTION COMPLETION.

STATE SEAL & DECD LOGO: ATTACHED

STATE SEAL

DECD LOGO

SECTION 01140

WORK RESTRICTIONS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Work Schedule
2. Construction Constraints
3. Vehicle Access
4. Available Work Area
5. Site Usage Plan

B. Related Requirements

1. Section 01310 - Coordination
2. Section 01325 - Scheduling of Construction

1.2 SUBMITTALS

A. Incorporate the requirements of this Section in the project schedule submitted under Section 01325.

B. Action Submittals

1. Submit site usage plan within 15 days of the Notice to Proceed.

1.3 WORK SCHEDULE

A. Conduct the Work during daylight hours on Monday through Friday, and within the time between 8:00 a.m. and 5:00 p.m. No work is to be done on Owner's holidays, Saturdays, Sundays or outside of the work hours described above.

B. No equipment or machinery may be started at the site before 8:00 a.m. and all equipment must be shut off by 5:00 p.m.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.1 CONSTRUCTION CONSTRAINTS

A. The following are constraints for the Work. Incorporate these constraints into the schedule required to be submitted under Section 01325.

1. All project milestones must be completed within the timeframes indicated in Section 01325.
2. Contractor is responsible for providing all water and electricity needed to complete the work. Contractor is also responsible for contacting the appropriate utility companies to coordinate temporary and permanent utility shut downs, as necessary.

3. Contractor is responsible for assuring safe access to the work areas.

4. Contractor is responsible for securing the site and maintaining site safety throughout the duration of the project.

3.2 VEHICLE ACCESS

A. Vehicle access will be restricted to construction entrances approved by the Town, Owner and Engineer.

3.3 AVAILABLE WORK AREA

A. All work will be conducted by the Contractor within the Owner's property boundaries with the exception of required utility abandonment work, soil erosion control measures and miscellaneous work as shown on the project Drawings. No construction vehicles or activities will be permitted outside the property boundaries.

3.4 SITE USAGE PLAN

A. Submit a site usage plan showing all proposed staging areas, locations of all office and storage trailers, and material laydown areas. The site usage plan should be a drawing showing the proposed locations and shall include on-site traffic modifications and temporary utilities as may be applicable.

3.5 STATE HISTORIC PRESERVATION OFFICE RESTRICTIONS

A. A review by the State Historic Preservation Office (SHPO) stated "existing windows of the White Oak Building appeared to be in good condition and contributed to the historic integrity" and is requiring the Office Building windows to "retained." Contractor must take all necessary precautions to protect and not damage window openings at the Office Building when removing the actual windows as is required in the abatement specifications.

END OF SECTION

SECTION 01220

Unit Prices

PART 1 GENERAL

1.1 SUMMARY

A. A unit price is an amount proposed by Bidders as a price per unit of measurement for materials or services that will be added to or deducted from the Contract Sum by Change Order in the event the project Scope of Work is altered.

B. Unit prices shall include costs of all materials, all direct or indirect expenses of the Contractor or Sub-Contractors, profit, insurance, bonding, and any applicable taxes.

1.2 RELATED SECTIONS

A. Related Sections

1. Section 02120, Transportation and Disposal of Contaminated Materials
2. Section 13281, Asbestos Abatement
3. Section 13282, Lead Paint Awareness
4. Section 13283, Hazardous Materials Management
5. Section 13286, PCB-Contaminated Building Materials Abatement

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

3.1 UNIT PRICE SCHEDULE – BASE BID

A. Unit Prices in accordance with the following schedule will apply to this Contract. Unit prices include labor, disposal, and all necessary fees.

Item No. 1 – Removal and Disposal of Asbestos-Containing Pipe Insulation, Pipe Fitting Insulation, and Pipe Sealant (2”-4” O.D.)

$_____ per linear foot.

Item No. 2 – Removal and Disposal of Asbestos-Containing Floor Tile, Mastic, and Leveler and Associated (Adhesive, Felts, Carpet, Ceramics, and Plywood)

$_____ per square foot.

Item No. 3 – Removal and Disposal of Asbestos-Containing Stair Tread and Adhesive

$_____ per square foot.

Item No. 4 – Removal and Disposal of Asbestos-Containing Safes and Vault Doors

$_____ Per each.

Item No. 5 – Removal and Disposal of Asbestos-Containing Exterior Window Glazing and Metal Framing

$_____ per each.

Item No. 6 – Removal and Disposal of Asbestos-Containing Wall Panel Adhesive and Associated Gypsum/Paneling

$_____ per square foot.

Item No. 7 – Removal and Disposal of Asbestos-Containing Cement Board Paneling

$_____ per square foot.

Item No. 8 – Removal and Disposal of Asbestos-Containing Capstone and other exterior Expansion Joint Caulk, Including Re-Caulking of Joints.

$_____ per linear foot.

Item No. 8 – Removal and Disposal of PCB-Contaminated Plaster Walls and Ceilings (PCBs <50 ppm) as CTDEEP Regulated PCB Waste

$_____ per square foot.

Item No. 9 – Removal and Disposal of PCB-Contaminated Wood Door, Window, Trim, Baseboard Systems (PCBs <50 ppm) as CTDEEP Regulated PCB Waste

$_____ per square foot.

Item No. 11 – Removal and Disposal/Recycling of PCB-Contaminated Metal Siding/Walls (PCBs <50 ppm) as CTDEEP Regulated PCB Waste

$_____ per square foot.

Item No. 12 – Removal and Disposal of PCB-Contaminated Exterior Window Systems (PCBs ≥50 ppm) as EPA Regulated PCB Bulk Product Waste (Sash, Trim, Frame, Well, Etc.)

$_____ per each

Item No. 13 – Removal and Disposal of PCB-Contaminated Paint (PCBs <50 ppm) from Brick/ Concrete/Stone/Wood Walls, Ceilings and Columns as CTDEEP Regulated PCB Waste (Paint Removal and Disposal Only)

$_____ per square foot.

Item No. 14 – Removal and Disposal of PCB-Contaminated Paint (PCBs <50 ppm) from Metal Columns as CTDEEP Regulated PCB Waste (Spot Removal and/or Drilling only)

$_____ per square foot.

Item No. 15 – Removal and Disposal of PCB-Contaminated Paint (PCBs ≥50 ppm) from Metal Beams as EPA Regulated PCB Bulk Product Waste (Spot Removal and/or Drilling only)

$_____ per square foot.

Item No. 16 – Removal and Disposal of PCB-Contaminated Paint/Stucco (PCBs ≥50 ppm) from Exterior Facade as EPA Regulated PCB Bulk Product Waste (Spot Removal only)

$_____ per square foot.

Item No. 17 – Preparation of a small containment (for removal of >3 LF/SF, but <10 SF/25LF) using remote decontamination unit (including remobilization, if necessary)

$_____ per containment.

Item No. 18 – Preparation of a medium-containment (for removal of >10 SF/25SF, but <500 LF/1500 SF) with decontamination unit (including remobilization, if necessary)

$_____ per containment.

Item No. 19 – Preparation of a large-containment (for removal of >500 LF/1500 SF) with decontamination unit (including remobilization, if necessary)

$_____ per containment.

END OF SECTION

SECTION 01290

APPLICATION AND CERTIFICATE FOR PAYMENT

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Definition and description of measurement and payment to be used for the Work

2. Payment procedures

3. Payment requests for stored materials

B. Related Requirements

1. Section 01295 - Schedule of Values

1.2 GENERAL

A. The following paragraphs describe payment procedures for the work to be done under the respective items in the Bid Form.

B. Each lump sum will be deemed to include an amount considered by the Contractor to be adequate to cover the Contractor's overhead and profit for each separately identified item.

C. Except as provided for in Section 01295, no separate measurement or payment will be made for Work called for in Division 0 or Division 1 of the Contract Specifications, unless specifically covered under the Bid items listed below. All costs associated with this Work will be considered incidental to the Contract Bid price.

D. Division 2 through Division 13 Work will be measured and paid for at the Contractor's lump sum Bid price as indicated on the Bid form. Those payable Work items, and related prices as Bid, will be the basis for all compensation to the Contractor for Work performed under this Contract. Work not specifically included as a Bid item, but which is required to properly and satisfactorily complete the Work is considered ancillary and incidental to the Bid item Work, and payment for such Work is considered to be included in the values as Bid for payable items.

1.3 LUMP SUM ITEMS

A. Each lump sum price stated in the Bid form shall constitute full compensation for all labor, equipment and materials necessary and required to complete the work specified under that particular item, and also all costs for doing related work as set forth in the Contract Documents or implied in carrying out their intent.

1. Measurement

a. There will be no measurement of quantities for lump sum items. Periodic partial payments for this Work, included under the Agreement, shall be based on the percent completion of each work item listed in the Schedule of Values provided under Section 01295 estimated by the Contractor and approved by the Engineer.

2. Payment

a. The lump sum payment for each work item listed in the Schedule of Values provided under Section 01295 estimated by the Contractor and approved by the Engineer shall be full compensation for furnishing all labor, materials, tools, equipment, waste disposal, and other services necessary for completion of the work item, in its entirety as detailed in the Contract Documents.

1.4 PAYMENT PROCEDURES

A. Informal submittal: Unless otherwise directed by the Engineer:

1. Make an informal submittal of request for payment by filling in pertinent portions of EJCDC C-620, Contractor's Application for Payment, plus continuation sheet or sheets, as necessary.

2. Make this preliminary submittal to the Engineer on the last Monday of each month or another time agreed upon by Owner and Engineer.

3. Revise the preliminary submittal as approved by the Engineer and incorporate the approved payments into the formal submittal.

B. Formal submittal: Unless otherwise directed by the Engineer:

1. Make formal submittal of request for payment by filling in the agreed data, by typewriter or electronically on EJCDC C-620, Contractor's Application for Payment, plus continuation sheet or sheets.

2. Sign and notarize the Application for Payment.

3. Submit the original of the Application for Payment, plus two identical copies of the continuation sheet or sheets, to the Engineer.

4. The Engineer will compare the formal submittal with the approved informal submittal and, if acceptable, will sign the Contractor's Application for Payment, and present the Application to the Owner.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01295

SCHEDULE OF VALUES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Schedule of Values

1.2 SUBMITTALS

A. Action Submittals

1. Submit electronically the Schedule of Values for approval within 10 days after the Effective Date of the Agreement.

1.3 SCHEDULE OF VALUES

A. Schedule of Values shall be a detailed breakdown of the lump sum Work items showing values allocated to the various elements of the Work.

B. The format of the Schedule of Values shall be a breakdown by significant work items including those identified on the Proposal Fee Form. Content shall be submitted on EJCDC C-620, Contractor's Application for Payment. The Engineer may require additional detailed documentation to support the values in the form of executed purchase orders, subcontracts, or other agreements.

C. The Engineer will determine the level of breakdown and detail required. The Schedule of Values shall include all bid items used on the Proposal Fee Form as well as further breakdown including disposal for each applicable item. The final document will be the basis of payment requests for the duration of the Contract. No progress payment will be made until the Schedule of Values is approved by the Engineer.

D. An unbalanced Schedule of Values providing overpayment on items of work performed first will not be accepted.

E. Items for mobilization and demobilization will be included in the Schedule of Values. The combined value shall not exceed 5 percent of the Contract Price, and the values for mobilization and demobilization shall be equal. Payment for mobilization will be included in the first payment request after the Contractor has initiated full-time construction activity. Payment for demobilization will be included in the first payment request after Substantial Completion has been reached and all equipment and waste has been removed from the Site.

F. At the Contractor's option, an item for bonds and insurance may be included in the Schedule of Values. If included, requests for payment including values for bonds and insurance shall be accompanied by matching invoices.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

SECTION 01310

COORDINATION

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Project Management
2. Coordination
3. Project Meetings

B. Related Requirements

1. Section 01140 - Work Restrictions
2. Section 01325 - Scheduling of Work

1.2 SUBMITTALS

A. Incorporate the requirements of this Section, as well as Work which may impact the existing site operations (if any), or the operations of any adjacent utilities, facilities, or properties, in the project schedule submitted under Section 01325.

B. Informational Submittals

1. Submit to the affected utility company, the Owner, and the Engineer, in writing, all requests for temporary shutdowns of facilities or interruption of operations. No shutdowns or interruptions to existing operations will be permitted except as outlined in this Section. Submit requests at least 2 weeks prior to the beginning of the Work requiring shutdown or interruption. No shutdown shall occur without the approval of the utility company or the Owner.
2. At the pre-construction conference, supply to the Owner the cell phone number of a responsible person who may be contacted during off-hours for emergencies 24 hours a day, seven days a week.
3. Prepare a contact list of phone numbers, including cell phone numbers, and emails for all Project personnel and submit to the Engineer at the pre-construction conference. Include Contractor, Owner, Engineer, and Town personnel including police, fire, and ambulance.

1.3 PROJECT MANAGEMENT

A. Retain a full-time Superintendent, satisfactory to the Owner and Engineer. The Superintendent shall not be changed except with the consent of the Owner and Engineer. The Superintendent shall be in full charge of the Work.

B. Complete the Work in a continuous uninterrupted operation. Use sufficient personnel, adequate equipment, and necessary waste disposal transportation and disposal to complete the Work within the Contract Time.

1.4 COORDINATION

A. The Contractor is responsible for coordinating initial access to the building and any communication with utility companies that the Contractor may request service from.

B. The Contractor is responsible for submitting the Asbestos Abatement Notification form to the Connecticut Department of Health (CT DPH) and US EPA notifications and obtaining any permits required to complete the work. All coordination efforts required to submit the notice and obtain permits is the responsibility of the Contractor.

C. The Contractor is responsible for coordinating all trucking and waste disposal work including the preparation of all waste profiles and manifests. Engineer will review and provide comment, as needed before asking the Town to sign waste disposal documents.

D. The Contractor is responsible for coordinating with a Professional Engineer for services which may be required.

E. Coordinate with appropriate utility companies, as well as with the Owner, where the Work crosses or is adjacent to existing utilities.

F. Do not interfere with the operation of the existing facilities.

G. Perform all coordination necessary to complete the Work.

1.5 PROJECT MEETINGS

A. Pre-Construction Conference

1. The Contractor shall be prepared to discuss the following subjects at the Pre-Construction Conference. Documentation for these items is required to be submitted within the time frames included in individual specification sections.

a. Project scheduling

b. Sequencing of critical path Work items

c. Shop Drawing procedures

d. Project changes and clarification procedures

e. Use of sites, access to Work areas, office and storage areas, security and temporary facilities

f. Contractor safety plan and representative

g. Progress payments and procedures

h. Required documentation

i. Project personnel contact list

B. Progress Meetings

1. Progress meetings will be held every 2 weeks and at other times as requested by the Owner or as required by the Progress of the Work.

2. The Contractor’s Superintendent and Project Manager shall attend all progress meetings.

3. At a minimum, progress meetings will review Work progress, schedule, Shop Drawing submission schedule, Applications for Payment, and other matters needing discussion and resolution.

4. Review the schedule with all parties to be affected by upcoming work.

5. Review the monthly construction report required under Section 01325.

C. Attend requested meetings with the Town and/or Engineer to discuss the progress of the Work and address any local concerns.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 GENERAL

A. Submit the required Asbestos Abatement Notification forms to the CT DPH and US EPA a minimum of 10 days prior to any asbestos abatement operations.

B. Notify Call Before You Dig at 1-800-922-4455 at least 72 hours prior to any digging, trenching, rock removal, demolition, borings, backfill, grading, landscaping, or any other earth moving operations.

3.2 COORDINATION WITH THE OWNER'S OPERATIONS

A. Notify the Owner and Engineer, in writing, a minimum of 1 week in advance of commencing Work on site. Work on site shall not occur until all necessary permits are obtained.

B. Notify the Owner and Engineer, in writing, a minimum of 1 week before commencing any work which may affect the Owner's operations.

C. Perform all construction activities so as to avoid interference with Owner's operations and the work of others including off-site businesses.

D. The Owner has the authority to order the Work stopped. Any costs and/or delays associated with these work stoppages due to the Contractor's operation shall be borne by the Contractor.

3.3 SEQUENCE OF CONSTRUCTION

A. Completing the Work will require a specific sequence of construction. The Contractor will be allowed reasonable flexibility in scheduling the construction activities. Provide a detailed construction schedule as required in Section 01325.

END OF SECTION

SECTION 01320

CONSTRUCTION PHOTOGRAPHS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Photographs taken at specified intervals before, during and after construction.

1.2 SUBMITTALS

A. Informational Submittals

1. Submit electronic files of each photograph on a CD or USB flash drive.

PART 2 PRODUCTS

2.1 CONSTRUCTION PHOTOGRAPHS

A. Electronic files shall be in .jpg format.

PART 3 EXECUTION

3.1 PRE-CONSTRUCTION PHOTOGRAPHY

A. Prior to the commencement of any Work under this Contract, take a minimum of 20 photographs at representative locations throughout the work areas and exterior of the buildings. The photographs will serve as a record of the original conditions where construction activities will occur.

B. The area to be photographed shall include, but not be limited to, the area within and adjacent to the proposed construction, including roadways, utilities, driveways, landscaping, trees, interior and exterior of structures and buildings.

C. Provide a minimum of 20 preconstruction photographs, or more as required to document the preconstruction condition of the Site and adjacent properties.

3.2 PROGRESS PHOTOGRAPHY

A. Take construction photographs of active work areas daily throughout the life of the Contract. The photographs shall be indicative of the work that is currently in progress. A minimum of 3 photographs shall be taken at each scheduled interval at each location where Work is in progress.

B. Take photographs of each hazardous building materials abatement location prior to and after abatement. The photographs shall show the entire abatement area in sufficient detail to observe the location of all known materials to be abated.

3.3 POST-CONSTRUCTION PHOTOGRAPHY

A. Provide representative post construction photography after all Work has been completed at each location.

END OF SECTION

SECTION 01 325

SCHEDULING OF WORK

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Progress Schedule

B. Related Requirements

1. Section 01140 - Work Restrictions

2. Section 01310 - Coordination

1.2 PROGRESS SCHEDULE

A. Graphically show the order and interdependence of activities, sequence of Work, how the start of a given activity depends on completion of preceding activities, and how completion of an activity may restrain the start of subsequent activities.

B. The Work shall be planned by the Contractor and his Project field superintendent in coordination with all Subcontractors and Vendors (including waste haulers) whose Work is shown on the Progress Schedule or is required to complete the work.

C. Include, at a minimum, the following activities on the Progress Schedule:

1. Submittal and approval of Permits and Work Plans

2. Project mobilization

3. Site fencing

4. Hazardous building materials abatement broken down by material type, building areas, or otherwise as approved by Engineer

5. Substantial completion and inspection

6. Punchlist

7. Final cleanup

8. Other activities that may be critical to the Progress Schedule

9. All activities of the Owner and the Engineer which affect progress and/or affect required dates for completion of the Work

D. Take into consideration submittal and permit approval time, the delivery times of equipment and materials, Subcontractors' Work, availability and abilities of workmen, availability of trucking and disposal, weather conditions, any restrictions in operations at the Work site, and all other items that may affect completion of the Work within the Contract Time.

E. The Progress Schedule shall reflect the requirements and constraints outlined in Section 01310, Coordination.

F. The Progress Schedule shall reflect Work restrictions outlined in Section 01140.

G. Show information in such detail that duration times of activities will range from one to 15 days. The selection and number of activities shall be subject to the approval of the Owner and Engineer.

H. The Progress Schedule should show description of each activity and activity duration in calendar days.

1.3 SUBMITTALS

A. Informational Submittals

1. Submit electronically the preliminary Progress Schedule prepared in accordance with the requirements of this section. Progress schedule must be submitted within 10 days after the Effective Date of the Agreement. Progress Schedule must be approved by the Owner and Engineer before the first progress payment will be made.

2. Revised analyses - Within 10 days after receipt of the review comments, submit 1 electronic copy and 1 hardcopy of the Progress Schedule revised in accordance with those comments.

3. Before initiating the Work, submit an estimated monthly rate of Contractor payments for the project. If the payment schedule deviates from the original projection, submit a revised rate of expenditure schedule.

1.4 PERIODIC REPORTS

A. At the first scheduled progress meeting, present a summary report detailing the Work completed. The report shall include the following at a minimum:

1. Actual progress of Work. Update the Progress Schedule accordingly.

2. The Progress Schedule, or revised Progress Schedule, should show the portions of the Progress Schedule impacted by the Work progress.

3. Activities or portions of activities completed during the reporting period, and their total value as basis for Contractor's periodic request for payment. Payment made will be based on the total value of such activities completed or partially completed after verification by the Engineer.

4. State the percentage of the Work actually completed and scheduled as of the report date, and the progress along the critical path in terms of days ahead of or behind the dates defined in the Progress Schedule.

5. If the Work is behind the dates set forth in the Progress Schedule, also report progress along other paths with negative slack.

6. Include a narrative which includes:

a. A description of problem areas, anticipated and current

b. Delaying factors and their impact

c. An explanation of corrective actions taken or proposed

7. Show the date of latest revision.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

SECTION 01330

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Action Submittals

2. Informational Submittals

1.2 DEFINITIONS

A. Action Submittals – includes written and graphic information submitted by Contractor that requires Engineer's approval.

B. Informational Submittals – includes information submitted by Contractor that does not require Engineer's approval. The Engineer will acknowledge receipt of such documents and provide comments when the submittals lack the detail required by the Contract Documents.

1.3 ACTION SUBMITTALS

A. Shop Drawings

1. Shop Drawings as specified in individual work sections include, but are not necessarily limited to, custom-prepared data such as fabrication and construction drawings, schedule information, coordination drawings, individual system or equipment inspection and test reports as applicable to the Work.

2. Shop Drawings shall be of standardized sizes approved by Engineer.

3. Submit Shop Drawings at the proper time to prevent delays in delivery of materials. Coordinate submittals for related or interdependent equipment.

4. Advise the Engineer in writing of any deviations from the requirements of the Contract Documents.

5. Check all Shop Drawings regarding measurements, size of members, materials, and details to determine if they conform to the Contract Documents. Shop Drawings found to be inaccurate, not in compliance, or otherwise in error shall be returned to the Subcontractors or Suppliers for correction before submission to the Engineer. Drawings that are current shall be marked with the date, name, and approval stamp of the Contractor.

6. All details on Shop Drawings submitted for approval shall show clearly the relation of the various parts to the main members and lines of the structure, and where correct fabrication of the work depends upon field measurements, such measurements shall be made and noted on the Shop Drawings before being submitted for approval.

7. No material or equipment shall be purchased or fabricated until the required Shop Drawings have been submitted and approved. Materials and equipment and the work involved in their installation or incorporation into the Work shall then be as shown in and represented by the Shop Drawings.

8. Until the necessary approval has been given, do not proceed with any portion of the work, the design or details of which are dependent upon the design or details of work, materials, equipment or other features for which approval is required.

9. If submitted equipment requires modifications to the structures, piping, layout, or other details shown on the Drawings, details of the proposed modifications must also be submitted for approval. If such equipment and modifications are approved, perform all Work necessary to make such modifications at no additional cost to the Owner.

B. Work Plans as specified in individual work sections including but not necessarily limited to the following:

1. Waste Management Plan: In accordance with Section 02120

2. Asbestos Containing Materials Abatement Plan and other requested submittals: In accordance with Section 13281

3. Lead-Based Abatement Plan and other requested submittals: In accordance with Section 13282

4. Universal Waste Removal and Reclamation Plan and other requested submittals: In accordance with Section 13283

5. Contractor PCB abatement Work Plan and other requested submittals: In accordance with Section 13286

C. Schedule of Values: In accordance with Section 01295.

D. Site Usage Plan: In accordance with Section 01140.

1.4 INFORMATIONAL SUBMITTALS

A. Schedule of Submittals

1. Submit a preliminary Schedule of Submittals within 10 days of the Effective Date of the Agreement.

B. Application for Payment

1. Submit applications for payment in accordance with Section 01290, Application and Certificate for Payment.

C. Construction Photography: Provide preconstruction, progress, and post-construction photography and videography in accordance with Section 01320.

D. Contract Closeout Submittals: In accordance with Section 01770.

E. Contractor Design Data

1. Written and graphic information

2. List of assumptions

3. List of performance and design criteria

4. Calculations

5. List of applicable codes and regulations

6. Information requested in individual Specification sections

F. Manufacturer's Instructions: Written or published information that documents manufacturer's recommendations, guidelines, and procedures in accordance with individual Specification sections.

G. Schedules - Submit construction progress schedules and schedule updates in accordance with Section 01325.

H. Statement of Qualifications: Submit evidence of qualification, certification, or registration as required in Contract Documents to verify qualifications of professional land surveyor, engineer, materials testing laboratory, specialty subcontractor, trade, specialist, consultant, installer, and other professionals.

I. Submittals Required by Laws, Regulations, and Governing Agencies

1. Submit promptly notifications, reports, certifications, payrolls, and other required information as may be required, directly to the applicable federal, state, or local governing agency or their representative.

2. Transmit to Engineer for Owner's records, one copy of correspondence and transmittals (including enclosures and attachments) between Contractor and governing agency.

J. Test and Inspection Reports

1. Submit test and inspection reports as required by individual Specification sections.

2. Test and inspection reports shall contain the signature of the person responsible for test or report.

3. Reports shall include identification of product and Specification, project name, date and time of test, type of test, location, test results, corrective action required if report indicates test is not in compliance with Contract Documents, interpretation of test results, and other information as required in individual Specification sections.

K. Equipment Data: Submit information on equipment to be used in the performance of the Work as required by individual Specification sections.

L. Health & Safety Plans: When specified in individual Specification sections, prepare and submit a Health and Safety Plan modified or supplemented to include job-specific considerations.

M. Submittals stamped by another Professional Engineer: When specified in individual Specification sections, prepare and submit calculations and/or drawings stamped by a Professional Engineer licensed in the State where the work is being performed.

N. Coordination Drawings: When specified in individual Specification sections, prepare and submit drawings to show how multiple system and interdisciplinary work will be coordinated. Examples are conduit routing diagrams, duct layouts, utility coordination drawings, sprinkler plans etc.

O. Work Plans: When specified in individual Specification sections, prepare and submit copies of all work plans needed to demonstrate to the Owner that Contractor has adequately thought-out the means and methods of construction and their interface with existing facilities.

P. Erosion Control Plan: When specified in Contract Documents or required by local ordinances or regulations, prepare and submit copies of erosion control plans.

Q. Traffic Control Plan: When specified in Contract Documents or required by local ordinances or regulations, prepare and submit copies of traffic control plans.

R. Equipment Data: When specified in other Specification sections, information on equipment used by the Contractor to complete the Work, such as compaction equipment and closed-circuit television inspection equipment.

1.5 PROCEDURES

A. Coordination

1. Prepare and submit documentation in advance of fabrication and product manufacturer, so that the installation will not be delayed, other related work can be properly coordinated, and there is adequate time for review and resubmission, if required.

2. Provide no less than 10 days for review of submittals from the time received by the Engineer.

3. Re-submittals will be subject to same review time.

4. No extension of time will be authorized due to failure to provide approvable submittals sufficiently in advance of the Work.

B. Review Shop Drawings, product data, and samples prior to submission and verify and determine:

1. Field measurements

2. Conformance with the Contract Documents. Advise the Engineer in writing of any deviations from the requirements of the Contract Documents.

3. Delete or strike out information that is not applicable to the Work.

C. Submit one electronic copy of each submittal for the Owner and Engineer.

D. Numbering: Submissions shall be accompanied by a transmittal form referencing the project name and applicable Specification section. Submittals shall be numbered sequentially, with the applicable Specification section and a hyphen preceding the number. (*e.g.* Submittal number 11330-01). Resubmittals shall bear the same transmittal number with a revision number commencing with "1" (*e.g.* Submittal number 11330-01-1).

E. Provide a copy of the Submittal Certification Form (copy attached at the end of this section) which shall be attached to every copy of each submittal. Apply the Contractor's stamp and initials or signature certifying that the submission has been thoroughly reviewed for completeness, compliance with the Contract Documents, coordination with adjacent construction and dimensional compatibility. Items submitted without the stamp or that are incomplete will be returned by the Engineer for rework and resubmission.

F. Provide a copy of the PE Certification Form (copy attached at the end of this section) which shall be attached to every copy of each submittal stamped by another Professional Engineer. Items submitted without the completed certification form will be returned by the Engineer for resubmission.

G. Distribute copies of reviewed submittals along with the Engineer's transmittal to concerned parties with instructions to promptly report any inability to comply with the provisions or integrate the requirements with interfacing work.

H. Partial and Incomplete Submittals

1. Shop Drawings shall be submitted as a complete package by Specification section, unless otherwise reviewed and approved by the Engineer. It is the intent that all information, materials, and samples associated with each Specification section be included as a single submittal for the Engineer's review.

2. Engineer will return entire submittals if preliminary review deems it incomplete including:

a. Missing or incomplete Submittal Certification Form

b. Missing content

3. Partial submittals may be considered, at Engineer's option, only when necessary to expedite the Project.

4. Partial submittals shall be clearly identified as such on the transmittal to identify missing components.

I. Submittals not required by the Specification will be returned without review or action code.

J. Resubmission

1. Make corrections and modifications required by the Engineer and resubmit until approved.

2. Clearly identify changes made to submittals and indicate other changes that have been made other than those requested by the Engineer.

3. A maximum of two re-submissions of each shop drawing will be reviewed, checked and commented upon without charge to the Contractor (total of 3 submittals). Any additional submissions which are required by the Engineer to fulfill the stipulations of the Contract Documents will be charged to the Contractor using Engineer's standard billing rates.

K. Distribution

1. Distribute approved Shop Drawings and approved product data to the Project Site and elsewhere as required to communicate the information to Suppliers, Subcontractors, and field personnel.

1.6 ENGINEER'S REVIEW

A. The Engineer will review submittals for design, general methods of construction and detailing. The Engineer's review and approval of submittals shall not be construed as a complete check nor does it relieve the Contractor from responsibility for any departures or deviations from the requirements of the Contract Documents unless he has, in writing, called the Engineer's attention to such deviations at the time of submission. It will not extend to means, methods, technique, sequences, or procedures of construction (except where specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto.

B. The Engineer's review of the submittals shall not relieve the Contractor from the responsibility for proper fitting of the Work, or the responsibility of furnishing any work required by the Contract Documents which may not be indicated on the submittals. The Contractor shall be solely responsible for any quantities shown on the submittals.

C. If the Contractor considers any correction indicated on the submittals to constitute a change to the Contract Documents, the Contractor shall provide written notice to the Engineer at least 7 working days prior to release for manufacture.

D. When the submittals have been completed to the satisfaction of the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the Engineer.

E. Action submittals as defined in paragraph 1.2 will be reviewed and returned under one of the following codes:

1. Approved (Action Code 1) is assigned when there are no notations or comments on the submittal. Equipment or materials may be released for manufacture, provided that it complies with requirements of the Contract Documents.

2. Approved as Noted (Action Code 2) is assigned when there are notations or comments on the submittal, but the equipment or materials may still be released for manufacture. All notations and comments must be incorporated in the final product. Resubmission is not necessary.

3. Revise and Resubmit (Action Code 3) is assigned when there are notations and comments requiring a resubmittal of the package. Work cannot proceed until the submittal is revised and resubmitted for review.

4. Not Approved (Action Code 4) is assigned when the submittal contains non-specified items or does not meet the requirements of the Contract Documents. It may also be assigned when there is a significant amount of missing material required for the Engineer to perform a complete review. The entire package must be resubmitted, revised to bring the submittal into conformance. It may be necessary to resubmit using a different manufacturer/vendor to meet the requirements of the Contract Documents.

F. Informational submittals as defined in paragraph 1.2 do not require approval by the Engineer. Such submittals will be returned under one of the following codes:

1. Receipt Acknowledged (Action Code 5) is assigned when the submittal is provided for documentation purposes and is acknowledged as received. Comments may be noted using this action code.

2. Revise and Resubmit (Action Code 6) is assigned when there are notations and comments requiring a resubmittal of the package.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

SUBMITTAL CERTIFICATION FORM

PROJECT:_____
ENGINEER:_____ ENGINEER'S PROJECT NO.:_____
CONTRACTOR:_____ CONTRACTOR'S PROJECT NO.:_____

TRANSMITTAL NO.:_____ SUBMITTAL NO.:_____
SPECIFICATION NO.:_____ DRAWING NO:_____
DESCRIPTION:_____
MANUFACTURER:_____

The above referenced submittal has been reviewed by the undersigned and I/we certify that the materials and/or equipment meets or exceeds the project specification requirements; that field measurements, dimensions, quantities, specified performance criteria, installation requirements, materials, catalog numbers and related materials have been verified; that all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the work has been determined and verified; that review includes all information related to the contractor's sole responsibility for means, methods, techniques, sequences, and procedures of construction and safety; and item has been coordinated with the overall project with:

☐ NO DEVIATIONS

☐ A COMPLETE LIST OF DEVIATIONS AS FOLLOWS:

_____
_____
_____
_____
_____
_____

SUBMITTED BY:_____ DATE:_____

GENERAL CONTRACTOR'S STAMP

PE CERTIFICATION FORM

The undersigned hereby certifies that he/she is a Professional Engineer registered in the State of Connecticut and that he/she has been employed by

_____ to design
(Name of Contractor)

_____
(Insert PE Responsibilities)

In accordance with Specification section _____for the

_____
(Name of Project)

The undersigned further certifies that he/she has performed the said design in conformance with all applicable local, state and federal codes, rules and regulations; and, that his/her signature and PE stamp have been affixed to all calculations and drawings used in, and resulting from, the design.

The undersigned hereby agrees to make all original design drawings and calculations available to the

_____
(Insert Name of Owner)

or Owner's representative within seven days following written request therefor by the Owner.

_____	_____
PE Name	Contractor's Name
_____	_____
Signature	Signature
_____	_____
Title	Title
_____	_____
Address	Address

SECTION 01350

HEALTH & SAFETY PLAN

PART 1 GENERAL

1.1 SUMMARY

A. The Contractor must:

1. Develop a site-specific Health and Safety Plan (HASP) specifically addressing the potential hazards that may be encountered at the work site. The HASP shall include the information described in this specification (as applicable) and meet all applicable OSHA requirements.

2. Furnish all labor, equipment, materials, and employee training for effective implementation of the HASP and worker health and safety protection of all Contractor personnel.

3. Furnish all labor, equipment, materials, and employee training to effectively complete any required air monitoring and/or decontamination.

4. Review the requirements and data provided for the project and supplement the HASP with any additional measures deemed necessary to fully comply with applicable regulatory requirements and to adequately protect personnel on the site.

5. Maintain a copy of the HASP at the worksite, accessible to employees working at the site.

6. Post the emergency response plan section of the HASP, inclusive of emergency alerting and response procedures and directions to the nearest hospital, in a visible location for all workers to see.

B. Related Sections

1. 13281 – Asbestos Abatement

2. 13282 – Lead Paint Awareness

3. 13283 – Hazardous Materials Management

4. 13286 – PCB-Contaminated Building Materials Abatement

1.2 SITE-SPECIFIC PROJECT CONDITIONS

A. The Contractor shall review and understand all existing information as it relates to potential exposure to subsurface site contaminants, environmental data, and reports.

B. The Contractor shall review and understand all existing information as it relates to potential exposure to hazardous structure/building materials (i.e., asbestos, polychlorinated biphenyls (PCBs), and lead paint). Site-specific information with respect to potential exposures to hazardous structure/building materials are included in applicable technical specifications contained herein. See applicable Sections 13281, 13282, 13283, and 13286, for applicable environmental data.

C. The nature of the materials present at the site may require use of special protective clothing and the possible use of respiratory protective equipment, which is intended to help minimize worker exposure to known or suspected site hazards.

1. Levels of personal protection are established in reference standards and generally described for Levels C and D herein. It is anticipated that a majority of the Work to be performed on this project may be performed at Personnel Protection Level D.

2. The Contractor shall be responsible for determining if a higher level of personnel protection is required based on the criteria outlined in the Contractor's HASP. In the event that the Contractor determines that a level of protection higher than Level D is required, the Contractor's personnel shall take the necessary steps outlined in the Contractor's HASP.

3. The Contractor shall notify the Engineer and Owner in writing prior to implementing any upgrades in personal protection. The Engineer will review the Contractor's notification and determine the need to notify other applicable agencies.

1.3 REFERENCES

A. OSHA 29 CFR Part 1910 (General Industry standards)

B. OSHA 29 CFR Part 1926 (Construction Standards)

C. OSHA Regulation 29 CFR §1910.120 (HAZWOPER) OSHA Regulation 29 CFR §1926.65 (HAZWOPER)

D. Applicable state regulations

E. OSHA Regulation 29 CFR §1926.62 (Lead)

F. OSHA Regulation 29 CFR §1926.1101 (Asbestos)

1.4 DEFINITIONS

A. CHMM: Certified Hazardous Materials Manager, as certified by the Institute of Hazardous Materials Management.

B. CIH: Certified Industrial Hygienist, as certified by the American Board of Industrial Hygiene®.

C. CSP: Certified Safety Professional, as certified by the Board of Certified Safety Professionals.

D. Site Safety and Health Official (SSHO): The individual located at a job site who is responsible to the Contractor and has the authority and knowledge necessary to implement the HASP and verify compliance with applicable safety and health requirements.

1.5 SUBMITTALS

A. On-site Work shall not begin until the HASP has been submitted by the Contractor and accepted by the Owner/Engineer.

B. Informational Submittals

1. Submit the following within thirty (30) days after the Effective Date of the Agreement.

    a. A site-specific HASP, including the information described in this Specification as applicable.

        1) The HASP must be reviewed, approved, and signed by Contractor representative, with specific responsibility for safety for the Contracting company.

        2) The Engineer's review is only to determine if the HASP is consistent with basic regulatory requirements and the minimum requirements of this specification. Engineer has no control over contractor's health & safety and the means and methods of health & safety implementation. Engineer also does not perform health & safety monitoring of Contractor's Work.

        3) The review will not determine the adequacy of the HASP to address all potential hazards, as that remains the sole responsibility of the Contractor.

    b. Documentation of qualifications and experience of the SSHO.

    c. Applicable health and safety training records.

2. Submit health and safety certification and training records, including:

    a. Current certifications of employee's HAZWOPER training, and

    b. Current certification of HAZWOPER supervisor training for project supervisors.

3. Contractor shall prepare and submit to Engineer a Decontamination Plan detailing specific methods for decontamination of equipment and transport vehicles leaving the site.

1.6 CONTRACTOR'S RESPONSIBILITIES

A. The Contractor is solely responsible for the health and safety of workers employed by the Contractor, any subcontractor, vendors/manufacturers, site visitors and anyone directly or indirectly employed by any of them.

B. Provide a designated SSHO for the project.

C. Pre-arrange emergency medical care services at a nearby hospital or medical clinic, including establishment of an emergency notification process and emergency routes of travel.

D. Conduct pre-entry and weekly safety meetings with all site personnel, documenting attendance and topics covered.

E. Develop and implement the site-specific HASP, inclusive of the elements contained in this specification.

F. For projects where contaminated media are known, likely, or suspected to be encountered:

1. Monitor air quality in and around the work area using appropriate air monitoring equipment.

2. Develop and implement a respiratory protection program per 29 CFR §1910.134 and 29 CFR §1926.103 for all workers authorized to wear respirators.

3. Record all air quality readings and maintain records on site.

4. Stop work and/or upgrade respiratory protection or personal protective equipment levels if action levels established in the HASP are exceeded.

5. Ensure that the degree and type of respiratory protection provided is protective for the monitored concentrations and individual chemical parameters.

6. Lawfully dispose of all personal protective equipment that cannot be decontaminated.

G. Provide a Lead Exposure Control Plan in accordance with 29 CFR §1926.62(e)(2).

1.7 HEALTH & SAFETY PLAN (HASP) REQUIREMENTS

A. The HASP shall comply with the requirements of 29 CFR §1910.120(b)(4) and 29 CFR §1926.65(b)(4).

B. The following items shall be included/addressed in the HASP:

1. A safety and health risk or hazard analysis for each site task and operation in the work plan.

a. A physical hazard evaluation and hazard control plan shall be included covering, but not limited to the following, as applicable:

1) Equipment operation

2) Confined space entry

3) Slips, trips, and falls

4) Building collapse

5) Falling debris

6) Encountering unmarked utilities

7) Cold and heat stress

8) Hot work (cutting and welding)

9) Drum and container handling

10) Trench and/or excavation entry

2. Employee training assignments to assure compliance with 29 CFR §1910.120(e) and 29 CFR §1926.65(e).

3. Personal protective equipment to be used for each site task and operation in the work plan.

a. Inclusive of a personal protective equipment program to comply with 29 CFR §1910.120(g)(5) and 29 CFR §1926.65(g)(5).

4. Medical surveillance requirements to comply with 29 CFR §1910.120(f) and 29 CFR §1926.65(f).

5. The frequency and types of air monitoring, personnel monitoring, and environmental sampling techniques and instrumentation to be used, including methods of maintenance and calibration of monitoring and sampling equipment to be used.

    a. The action level (AL) and Permissible Exposure Limit (PEL) for each contaminant must be listed along with the type of monitoring instrument that will be used.

    b. The frequency of the monitoring must also be included (i.e., continuous, daily, weekly, monthly).

6. Site control measures to comply with 29 CFR §1910.120(d) and 29 CFR §1926.65(d).

7. Decontamination procedures to comply with 29 CFR §1910.120(k) and 29 CFR §1926.65(k).

8. An emergency response plan for the safe and effective response to emergencies, including the necessary PPE and other equipment to comply with 29 CFR §1910.120(l) and 29 CFR §1926.65(l).

    a. Including, but not limited to the following:

        1) A map indicating the route to a nearby hospital or medical clinic for emergency medical care

        2) Procedures for emergency medical treatment and first aid

        3) The names of three (3) Emergency Response Contractors, experienced in the removal and disposal of oils and hazardous chemicals, that the Contractor intends to use in the event of an emergency

        4) Site evacuation routes and procedures

        5) Emergency alerting and response procedures

9. Confined space entry procedures to comply with 29 CFR §1910.146 and 29 CFR 1926, Subpart AA.

10. A spill containment program to comply with 29 CFR §1910.120(j) and 29 CFR §1926.65(j).

    a. Coveralls or Tyvek

    b. Gloves

    c. Safety boots/shoes

    d. Safety glasses

    e. Hearing protection (for high noise operations)

    f. Hard hat with optional face shield

1. Level C Protection:
    a. Air-purifying respirator
    b. Chemical protective overalls or Coveralls (e.g., Saran coated Tyvek)
    c. Gloves, inner (disposable, surgical type)
    d. Gloves, outer (Neoprene, Nitrile, Viton, or Butyl)
    e. Boots, chemical protective, steel toe and shank (Neoprene or Nitrile)
    f. Booties, chemical protective (disposable PVC)
    g. Hard hat
    h. Face shield (if necessary)
2. Levels B and A represent increased levels of personal protection and are described in the Reference Standards.
3. Contractor is fully responsible for all PPE selection (including the various stages of protection), proper use, maintenance, and continuous monitoring.

PART 2 EXECUTION

2.1 HEALTH AND SAFETY PLANNING AND IMPLEMENTATION

A. Implement the HASP throughout the execution of all applicable work.

B. The Contractor shall perform all monitoring as detailed in the HASP.

C. Contractor(s) shall implement routine health and safety meetings and any follow-up supplemental briefings.

D. Provide applicable health and safety training for all personnel who may come in contact with or be exposed to various dangerous, hazardous, or changing site conditions.

E. Personnel who have not received applicable training and who are not equipped with the required PPE, shall not be permitted access to the site by the Contractor during the course of the work that may result in potential exposures to unsafe or hazardous site conditions.

2.2 PERSONNEL AND EQUIPMENT DECONTAMINATION

A. All equipment shall be provided to the work site free of contamination. Engineer may prohibit from the site any equipment which in his opinion has not been thoroughly decontaminated prior to arrival. Any decontamination of Contractor's equipment prior to arrival at the site shall be at the expense of Contractor. Contractor is prohibited from decontaminating equipment on the project site which is not thoroughly decontaminated prior to arrival.

B. Contractor shall furnish labor, materials, tools, and equipment for decontamination of all personnel, equipment and supplies which are used to handle contaminated materials.

C. Properly store and dispose of contaminated PPE and all other generated decontamination waste.

2.3 INCIDENT REPORTING

A. The Contractor shall comply with all accident and/or incident reporting requirements, including the following:

1. Should any unforeseen safety-related factor, hazard, or condition become evident during the course of the work, the Contractor must immediately take action to establish, maintain, and secure the site and working conditions. This shall be followed by immediate notice to the Owner and Engineer.

2. If injury to any person on-site occurs, the Contractor shall immediately report the incident to the Owner and Engineer. Corrective actions shall be implemented.

END OF SECTION

SECTION 01520

CONSTRUCTION FACILITIES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Field office

2. Temporary sanitary and first-aid facilities

1.2 QUALITY ASSURANCE

A. Maintain temporary construction facilities in proper and safe condition throughout the progress of the Work.

1.3 FIELD OFFICE

A. Provide and maintain for the duration of the Work at a location approved by the Owner and the Engineer, a separate field office trailer or equivalent, for the exclusive use of the Resident Project Representatives. The plans and construction of the office shall be approved by the Engineer and shall be not less than 450 square feet.

B. Trailer shall be equipped with two exterior doors with screens, and at least 3 screened and lockable windows. The trailer shall be weather tight and insulated in the walls, floor and ceiling. Electrical and wireless internet service must be provided to the trailer. Doors shall be equipped with cylinder locks and two keys shall be supplied for the Engineer's use.

C. Each office shall be equipped with the following:

1. 2, flat top, 30″ x 60″ desks with a minimum of 3 drawers each

2. 2, standard desk arm chairs on rollers

3. 1, table at least 3 feet wide x 6 feet long with sufficient chairs to seat 6

4. 2, interior door mats.

5. Overhead lighting (75 foot candles minimum)

6. CO_2 fire extinguisher

7. 1, large waste baskets, 1 broom, and dust pan

8. Bathroom with toilet and sink

D. Thermostatically controlled heating units or central system of adequate capacity to maintain 70°F under all cold weather conditions. Thermostatically controlled refrigerant type air conditioners of adequate capacity to maintain a maximum temperature of not more than 68°F under all hot weather conditions.

E. Provide paper cups, paper towels, soap, toilet paper and suitable dispensers and holders for each of these items.

F. Maintain the office during construction of the Work. The cost for operation of the field office shall be the responsibility of the Contractor.

G. Remove all field offices and temporary facilities from the site after the completion of the Work. The premises shall be restored to a condition equivalent to that which existed prior to installation of the facilities, as determined by the Engineer.

1.4 TEMPORARY SANITARY AND FIRST AID FACILITIES

A. Provide suitably enclosed chemical or self-contained toilets for the use of the labor force employed on the Work. Toilets shall be located near the Work sites and secluded from observation insofar as possible. Toilets shall be serviced weekly, kept clean and supplied throughout the course of the Work.

B. Contractor shall enforce proper use of sanitary facilities.

C. Use of the Owner's sanitary facilities by the Contractor is prohibited.

D. Provide a first aid station at the site.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

SECTION 01725

PRESERVATION AND RESTORATION OF PROJECT FEATURES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Protection and replacement of trees, shrubs, signs, property markers, fences, building interiors, and related project features.

2. Taking precautions, providing programs, and taking actions necessary to protect public and private property and facilities from damage.

1.2 DEFINITIONS

A. Underground Structures

1. Underground structures are defined to include, but not be limited to, sewer, water, gas, and other piping, and manholes, chambers, electrical and signal conduits, tunnels and other existing subsurface work located within or adjacent to the limits of the Work.

2. Underground structures known to the Engineer are shown on the Drawings to the extent that locations are available. This information is shown for the assistance of the Contractor in accordance with the best information available, but is not guaranteed to be correct or complete. The Contractor shall be responsible for checking on the actual locations of water, sewer, gas electric and telephone service connection lines to avoid potential interferences.

B. Surface Structures

1. Surface structures are defined as existing buildings (including their interiors), structures and other facilities above the ground surface. Included with such structures are their foundations or any extension below the surface. Surface structures include, but are not limited to, buildings, tanks, walls, bridges, roads, dams, channels, open drainage, piping, poles, wires, posts, signs, markers, curbs, walks and all other facilities that are visible above the ground surface.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.1 REPAIR/RESTORATION

A. Piping, HVAC components, structural components, exterior facades and features, and similar building components or other items shall not be damaged or removed except where indicated on the drawings or as necessary to access the required Work, as approved by the Engineer. Items to be removed shall be clearly marked as directed by the Engineer. If objects not to be removed are damaged or removed, they shall be repaired or replaced to their original condition.

B. Trees, shrubs, and similar items shall not be removed except where indicated on the drawings or as necessary to access the required Work, as approved by the Engineer. Items to be removed shall be clearly marked as directed by the Engineer. If objects not to be removed are damaged or removed, they shall be repaired or replaced to their original condition.

C. Trees and shrubs on private property, which are removed or damaged by the Contractor shall be replaced in kind.

D. Signs, fences, property markers, walls, guard rails and other public or private property that are outside the Work scope shall be replaced in kind if damaged. Supports and protective devices required shall be provided.

E. Underground and Surface Structures

1. In the event of damage, injury or loss to existing utilities and structures that were not indicated to be removed or abandoned, whether shown on the Drawings or not, make all reasonable efforts to facilitate repairs and to mitigate the impact of such events upon the utility or structure owner's normal operations. Restore the existing utility or structure to the condition required by the owner of the utility or structure or at least to the condition found immediately prior to the Work. In the event that the utility owner elects to make the repairs, provide all reasonable access and assistance, and reimburse the utility owner for the cost of repairs. If utility service is interrupted due to damage to facilities, alternate facilities shall be provided.

2. All other existing surface facilities, including but not limited to, guard rails, posts, guard cables, signs, poles, markers and curbs which are temporarily removed to facilitate the Work shall be replaced and restored to their original condition at the Contractor's expense unless otherwise indicated in other sections of these specifications.

3. Wherever water, sewer, gas or petroleum piping, electric or telephone lines, cables or other utilities and structures, including those located inside the building are encountered and may be in any way interfered with, inform the Engineer and the appropriate utility company. Cooperate with the Engineer and utility company in the protection, removal, relocation, and replacement of structures and facilities.

4. Prior to proceeding with any Work, notify in writing owners of utilities and structures within the vicinity of the proposed Work that may be affected.

5. Work affecting water distribution systems, which will obstruct or otherwise take fire hydrants out of service, must be coordinated with the local fire department. The Contractor shall be prepared to provide access to blocked hydrants in the event of an emergency or take other measures in accordance with the requirements of the local fire department.

6. Materials used for relocation or replacement of utilities and structures shall be of an equivalent material, type, class, grade and construction as the existing or as approved by the respective owners thereof, unless otherwise shown or specified.

7. When any survey monument or property marker, whether of stone, concrete, wood or metal, is in the line of any trench or other work and may have to be removed, notify the Engineer in advance of removal. Under no circumstances

shall any monument or marker be removed or disturbed by the Contractor or by any of his Subcontractors, employees or agents, without the permission of the Engineer. Monuments or markers removed or disturbed shall be reset by a land surveyor licensed in the State where the Work is located at the Contractor's expense. Should any monuments or markers be destroyed through accident, neglect or as a result of the Work under this Contract, the Contractor shall, at his own expense, employ a land surveyor licensed in the State where the Work is located to re-establish the monument or marker.

3.2 PROTECTION

A. Underground and Surface Structures

1. Sustain in their places and protect from direct or indirect injury underground and surface structures designated to remain within or adjacent to the limits of the Work. Such sustaining and supporting shall be done carefully and as required by the party owning or controlling such structure. Before proceeding with the work of sustaining and supporting such structure, satisfy the Engineer that the methods and procedures to be used have been approved by the party owning same.

2. Pay utility service company charges related to the temporary support of utility poles if required to complete the Work.

3. Assume risks associated with the presence of underground and surface structures within or adjacent to the limits of the Work. The Contractor shall be responsible for damage and expense for direct or indirect injury caused by his Work to any structure. Immediately repair damage caused by the Work to the satisfaction of the owner of the damaged structure.

4. Conduct all work in a manner that protects underground utilities, surface structures, and related appurtenances or other existing items and structures that are to remain in place.

B. State Historic Preservation Office Requirements

1. A review by the State Historic Preservation Office (SHPO) stated "existing windows of the White Oak Building appeared to be in good condition and contributed to the historic integrity" and is requiring the Office Building windows to "retained." Contractor must take all necessary precautions protect and not damage window openings at the Office Building when removing the actual windows as is required in the abatement specifications.

END OF SECTION

SECTION 01770

CLOSEOUT PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Documentation required for the transfer of the completed Work to Owner.

2. Final cleaning and site restoration

1.2 DEFINITION

A. Closeout is defined to include general requirements near the end of Contract Time, in preparation for final acceptance, final payment, normal termination of contract, occupancy by Owner and similar actions evidencing completion of the work. Specific requirements for individual units of work are specified in sections of Division 2 through 13. Time of closeout is directly related to "Substantial Completion".

1.3 SUBMITTALS

A. Closeout Submittals

1. Warranties and Bonds

2. Evidence of payment and release of liens

3. List of Subcontractors, service organizations, and principal vendors

4. Consent of surety as to release of final payment and retainage

1.4 SUBSTANTIAL COMPLETION

A. Within ten (10) days following receipt of Contractor's request for substantial completion inspection, the Engineer will either proceed with inspection or advise Contractor of prerequisites not fulfilled.

B. Following initial inspection, the Engineer will either authorize Certificate of Substantial Completion, or advise Contractor of Work which must be performed prior to issuance of certificate; and repeat inspection when requested and assured that work has been substantially complete. Results of completed inspection will form initial "punch-list" for final acceptance.

C. Should the Engineer consider that Work is substantially complete, the Contractor shall prepare, and submit to Owner a list of items to be completed or corrected, as determined by the inspection.

D. The Engineer will authorize the Certificate of Substantial Completion.

E. Complete work listed for completion or correction, within designated time.

F. Should the Engineer order that work list is not substantially complete, he shall notify Contractor in writing stating reasons.

G. Complete work, and send second written notice to Engineer certifying that Project, or designated portion of Project, is substantially complete.

H. Engineer will re-inspect work.

1.5 PREREQUISITES TO FINAL ACCEPTANCE

A. In addition to the requirements of the Contract Documents, submit prior to requesting Engineer's final inspection for certification of final acceptance and final payment, complete the following and list known exceptions (if any) in request:

1. Submit certified copy of Engineer's final punch-list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance.

2. Submit record drawings, specific warranties, workmanship/maintenance bonds, maintenance agreements, final certifications and similar record documents as specified herein.

1.6 FINAL ACCEPTANCE

A. Within ten (10) days following receipt of contractor's notice that the work has been completed, including "punch list" items from earlier inspections, Engineer will re-inspect the work. Upon completion of re-inspection Engineer will either notify Contractor in writing of work not completed or obligations not fulfilled as required for final acceptance of request Contractor submit evidence of payments, release of liens and final application for payment as an indication of final acceptance.

B. Contractor shall take immediate steps to remedy the stated deficiencies, and send second written notice to Engineer certifying that work is complete and Engineer will re-inspect work.

C. Should Engineer be required to perform second inspections because of failure to work to comply with original certifications of Contractor, The Owner will compensate Engineer for additional services, and deduct amount paid from final payment to Contractor. Engineer’s compensation will be at a maximum rate of two hundred and twenty-five dollars ($225) per hour.

1.7 PROJECT CLOSEOUT DOCUMENTS

A. Closeout Documents

1. Submit to the Engineer, final completed copies of the Waste Shipment Records (WSR), signed by all transporters and the designated disposal site owner/operator.

2. Submit to the Engineer copies of all Contractor's logs and all worker certifications.

3. Submit to the Engineer copies of all OSHA personal air monitoring results.

4. **Final payment will be withheld until receipt of all the above documentations to Owner’s/Engineer’s satisfaction.**

1.8 FINAL PAYMENT

A. Refer to the Contract Documents, for procedures relating to final inspection and payment.

B. The Contract shall be considered complete and final payment made, only when:

1. All provisions of the Contract Documents have been strictly adhered to.

2. The project and premises have been left in good order, including removal of all temporary construction, wastes, Contractor-owned and extraneous materials.

1.9 RECORD DRAWINGS

A. During progress of work maintain two sets of contract drawings, shop drawings, and any special drawings with mark-up of actual installation which vary substantially from the work as originally shown.

B. Mark whatever drawing is most capable of showing actual physical condition, fully and accurately.

C. When shop drawings are marked-up, mark cross-reference on contract drawings at corresponding location.

D. Mark with erasable color pencil, using separate colors where feasible to distinguish between changes for different categories of work at same general location.

E. Mark-up important additional information which was either shown schematically or omitted from original drawings. Give particular attention to information on work concealed, which would be difficult to identify or measure and record at a later date.

F. Note alternative numbers, change order numbers and similar identification.

G. Require each person preparing mark-up to initial and date mark-up.

1.10 RECORD SPECIFICATION

A. During progress of the work, maintain two copies of specifications, including addenda, change orders and similar modifications issued in printed form during construction, and mark-up variations (of substance) in actual work in comparison with text of specifications and modifications as issued. Give particular attention to substitutions, selection of options, and similar information on work where it is concealed or cannot otherwise be readily discerned at a later date by direct observation. Note related record drawing information and product data, where applicable.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.1 CLEANING

A. Clean job site and all work areas to the Engineers satisfaction.

B. Remove and entirely dispose of material or debris from the site or that has washed, flowed or has been placed in existing watercourses, ditches, gutters, drains, pipe, or structures, for work done under the Contract work limits. Leave ditches, channels, drains, pipes, structures, and watercourses in a clean and neat condition upon completion of the Work.

C. Restore or replace any public or private property damaged or removed during the course of the Work. Property shall be returned to a condition at least equal to that existing immediately prior to the beginning of operations. Complete all highway or driveway, walk, and landscaping work using suitable materials, equipment and methods. Perform restoration of existing property, signs or structures promptly as work progresses; do not leave restoration work until the end of the Contract Time.

END OF SECTION

SECTION 02120

TRANSPORTATION AND DISPOSAL OF CONTAMINATED MATERIALS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Transportation and disposal of Contaminated materials collected, consolidated, excavated, and generated during performance of the Work.

2. Coordination, loading, transportation, and disposal of contaminated materials.

B. Related Sections

1. Section 01350, Health and Safety

2. Section 13282, Lead Paint Awareness

3. Section 13283, Hazardous Materials Management

4. Section 13286, PCB-Contaminated Building Materials Abatement

1.2 DEFINITIONS

A. Disposal: The discharge, deposit, injection, dumping, spilling, leaking, incineration or placing of any contaminated material or otherwise hazardous substance into or on any land or water so that such hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters.

B. Generator: Any person, by site, whose act or process produces hazardous waste, or whose act first causes an oil or hazardous material to become subject to regulation.

C. Regulated Waste: Non-Resource Conservation and Recovery Act (RCRA) hazardous wastes such as oils, petroleum products or residuals, chemical liquids, chemical gases or vapors, non-Toxic Substances Control Act (TSCA) polychlorinated biphenyls (PCBs), waste chemical solids, including materials, and other contaminated material wastes not defined as RCRA Hazardous, TSCA-regulated, or Special Waste.

D. Manifest: An approved form used as a shipping document to identify the quantity, composition, and the origin, routing, and destination of regulated or hazardous waste from the site of generation to the point of disposal, treatment, storage, or use.

E. Shipping Paper: An invoice, bill of lading, or other shipping document serving a similar purpose; other than a hazardous waste manifest used to document the conveyance of materials between different locations, including regulated wastes when applicable.

F. Treatment: Any method, technique or process, including neutralization, incineration, stabilization or solidification, designed to change the physical, chemical or biological character or composition of any hazardous waste so as to neutralize such waste or so as to render such waste less hazardous, non-hazardous, safer to transport, amenable to storage, or reduced in volume, except such method or technique as may be included as an integral part of a manufacturing process at the point of generation.

G. TSCA/RCRA Landfill: This type of landfill is permitted to accept material that contains PCB at levels of 50 ppm to 500 ppm, acceptable for landfill disposal as defined in 40 CFR Part 761; material that is classified as either a RCRA characteristic waste or RCRA listed waste as defined in 40 CFR Part 261 but meets the treatment standards established in 40 CFR Part 268 - Land Disposal Restrictions; and all other material classified as a hazardous waste in CGS Section 22a-114 to 22a-134z Hazardous Waste Regulations. This type of landfill shall be approved to operate under a Federal Part B operating permit and shall be permitted to accept material with PCB concentrations up to 500 ppm under TSCA. The landfill shall be designed with a double composite liner meeting minimum RCRA design requirements. The landfill shall operate a leachate collection system and shall also operate a leak detection well system. The landfill shall be capable of stabilizing materials for meeting requirements of the USEPA's present rules required under the 1984 amendments to RCRA, banning the land disposal of hazardous material.

H. RCRA Landfill: This type of landfill is permitted to accept material that contains PCBs levels below 50 ppm; material that is classified as either a RCRA characteristic waste or RCRA listed waste as defined in 40 CFR Part 261 but meets the treatment standards established in 40 CFR Part 268 - Land Disposal Restrictions and all other material classified as a hazardous material in CGS Section 22a-114 to 22a-134z Hazardous Waste Regulations. This type of landfill shall be approved to operate under a Federal Part B operating permit. The landfill shall be designed with a double composite liner meeting minimum RCRA design requirements. The landfill will operate a leachate collection system and will also operate a leak detection well system. The landfill shall be capable of stabilizing materials for meeting requirements of the land ban.

I. Non-RCRA Out-of-State Lined Landfill: This type of landfill shall be state approved or permitted to accept material that is defined as a hazardous material in CGS Section 22a-114 to 22a-134z Hazardous Waste Regulations, but is not classified as either a RCRA characteristic waste or RCRA listed waste as defined in 40 CFR Part 261; material containing PCBs below 50 ppm; and all other material not permitted or unsuitable for in-state disposal or recycling.

J. Out-of-State Recycling Facility: This type of facility shall be state approved or permitted to accept material that is defined as a hazardous material in CGS Section 22a-114 to 22a-134z Hazardous Waste Regulations, but is not classified as either a RCRA characteristic waste or RCRA listed waste as defined in 40 CFR Part 261; material containing PCBs below the facility's permitted level; and all other material not permitted or unsuitable for in-state disposal or recycling.

K. In-State Recycling Facility: This type of facility shall be approved by the State of Connecticut to accept material that is classified as petroleum contaminated material, that would be classified as a hazardous material in CGS Section 22a-114 to 22a-134z Hazardous Waste Regulations if not managed under in CGS Section 22a-114 to 22a-134z Hazardous Waste Regulations; and is not classified as a RCRA characteristic waste or RCRA listed waste as defined in 40 CFR Part 261.

L. Landfill Facility (Reuse as Cover Material): This type of facility shall be approved by the State in which the landfill is located to accept material that is classified as polluted material, that would be classified as a hazardous material in CGS Section 22a-114 to 22a-134z Hazardous Waste Regulations if not managed under in CGS Section 22a-114 to 22a-134z Hazardous Waste Regulations; and is not classified as a RCRA characteristic waste or RCRA listed waste as defined in 40 CFR Part 261.

1.3 SUBMITTALS

A. Submit all pertinent information relating to the transport and disposal of materials specified herein, within 14 days after issuance of the Notice to Proceed and prior to transport and disposal. The information submitted be in one package and shall include the following, as a minimum:

1. Information for proposed treatment/disposal facility or facilities including the following:

a. General Information

1) Facility Name

2) Facility Address

3) Name of Contact Person

4) Title of Contact Person

5) Telephone Number of Contact Person

6) Permit Number

b. The facility shall specify the volume of material that can be accepted from the Project on a weekly and a total basis.

c. The facility shall provide written confirmation that they are permitted to accept and will accept the classified contaminated materials the general quality and quantity described by these specifications.

d. The facility shall provide a listing of all current and valid permits, licenses, letters of approval, and other authorizations to operate that they hold, pertaining to the receipt and treatment/disposal of the contaminated materials described by these specifications.

2. Connecticut Department of Transportation Transporter Identification Number and expiration date.

3. Name and address of all hazardous material transporters to be used to transport materials including proof of permit, license, or authorization to transport hazardous material in all affected states.

B. Upon receipt of final approval from treatment/disposal facility to accept contaminated materials, submit copy of said approval.

C. Within ten (10) working days after the off-site transportation of contaminated materials, submit copies of all paperwork related to transportation of contaminated materials. Such paperwork may include, but not be limited to receipts, weight tickets, and disposal certificates.

1. Provide certified tare and gross weight slips for each load received at the designated treatment/disposal facility which shall be attached to copy of related manifest or bill of lading.

D. Prior to receiving progress payment, submit documentation certifying that all materials were transported to, accepted, and disposed of, at the selected treatment/disposal facility. The documentation shall include the following, as a minimum.

1. Documentation for each load from the site to the disposal facility, including all manifests and any other applicable transfer documentation.

2. All documentation for each load shall be tracked by the original manifest or bill of lading document number assigned at the project site at time of signature by Generator or their designated representative.

1.4 REGULATORY REQUIREMENTS

A. Obtain all Federal, State and local permits, approvals, or authorizations required for the transport and disposal of contaminated materials. Adhere to all requirements of such permits, approvals, or authorizations.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.1 GENERAL

A. Sample, test, or analyze contaminated material for approval of final disposal.

B. Contaminated materials to be disposed of include, but are not limited to:

1. Asbestos containing building materials

2. PCB containing building materials using TCLP analytical methods only

3. Lead-based painted materials

4. Universal wastes

5. Chemicals, residuals, products, and other wastes found inside the buildings and on the site

6. Other materials from abatement and decontamination operations

C. All contaminated materials abated, consolidated, or otherwise managed during the course of the work will require special handling in accordance with these specifications, the Contractor's Health and Safety Plan, and all applicable permits, approvals, authorizations, and regulations.

D. Dispose of contaminated materials at facilities approved by Owner or Engineer.

E. All Contractor personnel shall wear personal protective equipment and protective clothing consistent with the levels of protection for this Work as indicated in the Site Health and Safety Plan.

F. Contractor shall select treatment/disposal facilities to receive contaminated materials from the Project which are established, fully operational, and in full compliance with all applicable Federal, State, and local regulations.

G. Perform collection of characterization samples and laboratory analyses to satisfy the acceptance criteria for selected receiving facility(s).

H. Remove all contaminated materials from the project site and legally dispose of materials.

3.2 DISPOSAL COORDINATION AND TRANSPORT

A. Contractor is solely responsible for coordinating treatment/disposal facility approval, scheduling, loading, transport, and ultimate disposal of contaminated materials at treatment/disposal facility. No claim for delay will be considered based upon Contractor's facility failing to meet Contractor's production schedule. No payments will be made for rejected loads.

3.3 MANIFESTS AND SHIPPING PAPERS

A. Owner is designated as the "Generator" and will sign all Manifests and Shipping Papers. Manifests and Shipping Papers shall be prepared by Contractor twenty four (24) hours in advance of shipment of contaminated materials. Authorized Owner's representative will sign as "Generator" as each load of contaminated material leaves the Project Site. Contractor shall forward appropriate original copies of Manifests or Bills of Lading to Engineer on the same day the contaminated materials leave the Project Site.

3.4 TRANSPORT OF CONTAMINATED MATERIAL

A. Transport contaminated materials off-site after all treatment/disposal facility documentation has been completed and the material accepted by said facility.

B. Transport contaminated materials from the site to treatment/disposal facility in accordance with all United States Department of Transportation (DOT), USEPA, Connecticut regulations and other regulations of all affected states.

C. The Hauler(s) shall be licensed in all states affected by transport.

D. Provide to Engineer copies of all weight slips, both tare and gross, for every load weighed and disposed of at the accepted disposal facility. The slips shall be tracked by the original manifest document number that was assigned by Engineer at the site. Owner will only make progress payments upon receipt of these weight slips.

E. Minimize the potential for development of free liquid during transport. Do not load excessively wet materials for transport. If free liquid does develop during transport, Contractor shall be responsible for proper collection and disposal of same.

F. All waste generated during the Work shall be removed from the Project Site in accordance with the requirements of this section.

END OF SECTION

SECTION 02225

SELECTIVE DEMOLITION

PART 1 GENERAL

1.1 SUMMARY

A. Interior selective demolition including but not limited to interior walls, floors, partitions, windows, electrical, plumbing, mechanicals, etc. Refer to Drawings to identify areas where selective demolition may be required to facilitate the specified abatement work.

B. Removal and lawful disposal of miscellaneous debris and solid waste disturbed during selective demolition.

1.2 RELATED SECTIONS

A. Section 01350 – Health & Safety Plan

B. Section 02120 – Transportation and Disposal of Contaminated Materials

C. Section 13281 – Asbestos Abatement

D. Section 13282 – Lead Paint Awareness

E. Section 13283 – Hazardous Materials Management

F. Section 13286 – PCB-Containing Building Materials Abatement

1.3 DEFINITIONS

A. Demolish – To tear down, segregate waste streams and lawfully recycle or dispose of all debris generated in the process including structure contents.

B. Limit of Work – Area delineated on Drawings that defines the extent of work under the Contract.

C. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.

D. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and store.

E. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.

F. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.

G. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

1.4 SUBMITTALS

A. Quality Control Submittals prior to commencement of on-site demolition:

1. Methods of demolition and equipment proposed for selective demolition. This submittal should be sufficient to demonstrate a thorough understanding of the Work to be completed and the means that will be implemented to safely complete the Work within the Contract Time without damage to surrounding structures or resources. The Engineer will review the submittal for completeness but will not "Approve" the means and methods.

2. Waste Management Plan to indicate the types of wastes to be generated and the proposed disposal or recycling locations.

B. Lead Management Plan- Submit written procedures for the methods to be employed for lead paint impact work including methods to remove painted components scheduled for demolition. If work has potential to create an airborne lead hazard, then provide information pertaining to dust control to a level of no emissions, surface preparation, containment construction (if necessary), ventilation, interface of trades, sequencing of lead related work, respirator usage, protective equipment, etc. as required in OSHA 29 CFR 1926.62 Lead in Construction. Shop drawings shall also be provided to show the containment/ventilation setup, decontamination area and other pertinent information. This plan may include the use of HEPA attachments with various dust generating power tools intended for use.

C. Pre-demolition Photographs: Show existing conditions of adjoining construction, including finish surfaces, that might be misconstrued as damage caused by demolition operations. Comply with Section 01320 "Construction Photographs." Submit before Work begins.

1.5 REGULATORY REQUIREMENTS

A. Contractor is solely responsible for obtaining permits or approvals which may be required to perform the work of this section, including all costs, fees and taxes required or levied.

B. Notify and obtain such permits or approvals from all agencies having jurisdiction over the Work, but not limited to Health, Building, and Fire Departments of the municipality and local, state and federal agencies.

C. Comply with all applicable federal, state, and local environmental, safety and health requirements regarding the renovation or demolition of structures and other site features and recycling or disposal of demolition debris, as applicable.

D. Conform to procedures identified in Section 01350 – Health and Safety Plan related to site hazards associated with the project with particular attention towards maintaining compliance with OSHA 1926.62 Lead in Construction regulations when impacting and creating lead dust during impact of any painted surface or component throughout the building.

E. Prepare and submit to State of Connecticut renovation/demolition notification for all selective demolition activities and pay associated fees. Form shall be submitted at least 10 days prior to the start of Work. Refer to Section 13281 Asbestos Abatement for additional details.

1.6 PRE-DEMOLITION MEETING

A. Participate in a pre-demolition meeting at the project site.

1. Inspect and discuss condition of construction to be selectively demolished.

2. Review structural load limitations of existing structure, as necessary to perform the Work.

3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.

4. Review areas where existing construction is to remain and requires protection.

1.7 JOB CONDITIONS – SELECTIVE DEMOLITION

A. The Owner assumes no responsibility for actual condition of items or structures to be demolished. However, variations within the structure may occur by Owner's removal and salvage operations prior to start of selective demolition work.

B. Provide temporary barricades and other forms of protection as required to protect Owner's personnel and general public from injury due to selective demolition work.

1. Provide protective measures as required to provide free and safe passage of Owner's personnel and general public to and from occupied portions of the facility.

2. Provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of structure of element to be demolished, and adjacent facilities or work to remain.

3. Protect from damage existing finish work that is to remain in place which will become exposed during demolition operations.

4. Protect floors with suitable coverings when necessary.

5. Protect Office Building window opening during all demolition and abatement work.

6. Remove protections at completion of work.

C. Promptly repair damages caused to adjacent facilities by demolition work at no additional cost to the Owner.

D. Conduct selective demolition operations and debris removal in a manner to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.

E. Do not close, block or otherwise obstruct roadways, walks or other occupied or used facilities without written permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.

F. Maintain existing utilities, keep in service, and protect against damage during demolition operations.

G. Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to governing authorities.

1.8 FIELD CONDITIONS

A. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical. Contractor is responsible for documenting such conditions and taking them into account when preparing their bid.

B. Hazardous Materials are present in buildings and structures and may require selective demolition to access such materials for abatement.

1. Hazardous material abatement is specified in Division 13.

PART 2 PRODUCTS

2.1 GENERAL

A. HEPA-Filtered Exhausts – Air inside the work area, if applicable, shall be exhausted through a High Efficiency Particulate Air (HEPA) filter.

B. Commercially manufactured HEPA-filtered exhaust units, with specification plates intact, must be provided for each work area to attain, at a minimum, four air volume changes per hour and an inward flow of clean air into each work area of at least 100 feet per minute. The HEPA filter shall be preceded by replaceable pre-filters and the unit must be designed so that it cannot be operated unless all filters are in place. The purpose of the containment system is to capture fugitive particulate while performing selective demolition.

C. Warning Signs and Labels - Work areas shall be properly demarcated in accordance with OSHA requirements. The contractor’s specific containment approaches may also include the following products:

1. Plastic Sheeting ("Poly") - shall be polyethylene or equivalent with two layers with a thickness of at least 6 mil for all applications.

D. Tape and Glue – Shall be capable of sealing plastic joints and attaching plastic to finished surfaces. The bonding strength and resulting seal integrity shall not be affected by mist or water, wetting or encapsulating agent, or any other materials to be used in the work area

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 operation of others at the facility, or employee’s access and safety.

C. Damaged or deteriorated materials shall not be used and shall be promptly removed from the premises.

D. Waste Containers and Transportation shall be suitable for loading, temporary storage, transport, and unloading of contaminated waste without risk of ripping, rupture, or exposure to persons, or emissions to the atmosphere.

2.2 SAFETY SUPPLIES AND EQUIPMENT

A. Contractor shall comply with Section 01350 and is fully responsible for the implementation and monitoring of all health and safety measures.

B. Respirator Types: As applicable, provide workers with a full or half facepiece respirator that is approved by NIOSH/MSHA for protection against airborne dust and other hazards that may be present, and meets the requirements of the OSHA standard.

C. Protective Clothing: As applicable, provide workers and approved visitors with disposable coveralls, head and foot coverings, gloves and eye protection (i.e. safety glasses) and half-face respiratory protection including HEPA cartridges.

PART 3 EXECUTION

3.1 INSPECTION

A. Verify that utilities have been disconnected and capped before starting selective demolition operations, where applicable. Perform lock-out/tag-out procedures as necessary.

B. Review available documents of existing construction or other existing condition and hazardous material information provided by Owner, if any. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.

1. Unknown Site Conditions - The information provided on the Drawings and in the Specifications is believed accurate. Field verify all information. Bear full responsibility for obtaining all locations of underground structures, utilities and their connections. Maintain services to buildings outside the limits of work, at no additional cost to the Owner.

2. Interior Elements - Interior features including but not necessarily limited to structural elements, walls, partitions, equipment, piping or other building facilities are not shown on the drawings and must be visually inspected. Inspect and appraise all features and facilities to be demolished or removed for salvage. Investigate to assure the condition of the work to be demolished and take all precautions necessary to ensure safety of people and property.

C. Verify that hazardous materials have been remediated before proceeding with selected demolition operations.

D. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs or video.

1. Comply with requirements specified in Section 01320 "Construction Photographs."

2. Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.

3.2 SITE PREPARATION

A. Remove and/or stabilize all overhead hazards, prior to commencing work near any building. Where hazards cannot be stabilized, mark and control areas below hazards to prohibit access below the hazards. Similarly, all holes through the floors or weak sections of the floor shall either be covered or clearly marked to prohibit entry. If necessary, floor coverings shall be capable of supporting heavy equipment use.

B. Remove asbestos containing materials and other hazardous materials prior to selective demolition where possible, in accordance with Division 13.

3.3 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Maintain all existing services/systems to remain and protect against damage.

B. Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems that must be removed to allow access for abatement activities.

1. Owner must approve any disconnects, utility service terminations, or system removals prior to Contractor initiating such work.

2. Arrange to shut off utilities with utility companies.

3. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building when necessary.

4. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components as needed to access abatement areas as needed and approved by Owner.

a. Remove portion of piping and cap or plug remaining piping with same or compatible piping material.

b. Piping to be abandoned in place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.

c. Equipment to be removed: Disconnect and cap services and remove equipment.

d. Equipment to be removed and reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.

e. Equipment to be removed and salvaged: Disconnect and cap services and remove equipment and deliver to Owner.

f. Ducts to be removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.

g. Ducts to be abandoned in place: Cap or plug ducts with same or compatible ductwork material and leave in place.

h. Where removed piping or ductwork passes through walls to remain, repair, in-fill, and surface patch openings using approved methods that match existing conditions.

3.4 PAINTED COMPONENTS AND DUST GENERATING OPERATIONS

A. Contractors Responsibilities: Lead based paint has been confirmed or assumed present on all painted surfaces and components throughout the facility. Any Contractor whose activities may generate leaded dust or impact a leaded surface shall be responsible for regulating their work area in accordance with OSHA 29 CFR 1926.62 Lead in Construction Regulations so that dust migration is contained properly within a regulated area. Once the dust generating work is complete, the same Contractor shall be responsible for the proper clean-up and disposal of painted component dusts and painted materials as defined in OSHA 29 CFR 1926.62.

B. A Regulated Area for painted component impact work shall be established using warning signs and caution tape. Remove any non-fixed items to storage areas and seal with polyethylene sheeting. Cover any openings or protrusions that share air space with the Regulated Area with a minimum of 6 mil. polyethylene sheeting and seal air tight. Once work commences, access to the work area shall be limited to Contractor and Owner authorized personnel. Workers shall be trained in the recognition of lead paint hazards and cleanup methods as identified in OSHA 29 CFR 1926.62.

C. It is expected that most selective demolition will be done with small hand tools and power tools and impact to painted surfaces will be minimal as complete painted component removal is likely. If selective demolition activities cause painted dust to become airborne, compliance to OSHA 1926.62 is required including construction of a Regulated Area, respiratory protection, use of protective personal equipment and the use of dust generating power tool devices with HEPA filtration attachments (in areas where dust control containments are not constructed) to capture airborne particulate so as to reduce worker exposure to lead.

D. Conduct personnel exposure monitoring to determine compliance with Federal and State regulations. All air samples collected by the Contractor shall be analyzed by a laboratory accredited by the American Industrial Hygiene Association. Sampling equipment shall be calibrated before and after each use. At a minimum, baseline personnel monitoring shall include at least 25% of workers at each different job operation or as required by OSHA regulations.

E. Results - Provide the Owner and the Engineer copies of all personnel exposure monitoring results, and shall post at the work site, immediately after obtaining the results, but not later than 48 hours after monitoring the results.

3.5 PROTECTION

A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.

2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.

3. Protect walls, ceilings, floors, window openings, and other existing finish work that are to remain or that are exposed during selective demolition operations.

4. Cover and protect furniture, furnishings, and equipment that have not been removed.

3.6 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.

2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.

3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.

4. As necessary, erect and maintain dust-proof partitions and closures as required to prevent spread of dust, fumes or debris to adjacent portions of the building.

5. Keep outdoors work sprinkled with water to minimize dust. Provide hoses and water connections for this purpose.

6. Provide temporary weather protection during selective demolition and construction activities until such time that the new infill is constructed.

7. If unanticipated mechanical, electrical or structural elements which conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict. Submit report to Engineer in written, accurate detail. Pending receipt of directive from Engineer, rearrange selective demolition schedule as necessary to continue overall job progress.

8. Perform selective demolition work in a systematic manner. Provide scaffolding as necessary. Use such methods as required to complete work indicated on Drawings in accordance with demolition schedule and governing regulations.

9. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.

10. Contact local fire department with respect to flame -cutting operations and maintain fire watch as directed by the local fire department.

11. Maintain adequate ventilation when using cutting torches.

12. Repair selective demolition performed in excess of that required. Return structures and surfaces to remain to condition existing prior to commencement of selective demolition work.

13. Dispose of demolished items and materials promptly.

B. Existing Items to Remain: Protect construction indicated to remain against damage during selective demolition. When permitted by Engineer, items may be removed to suitable, protected storage location during selective demolition and reinstalled in their original locations after selective demolition operations are complete.

3.7 DISPOSAL OF DEMOLISHED MATERIAL

A. General

1. Remove demolition waste materials from Project site and legally manage off-site in accordance with the contractor’s submitted Waste Management Plan.

2. Comply with Section 02120 – Transportation and Disposal of Contaminated Materials

3. Do not allow demolished materials to accumulate on-site.

4. Burning of demolition waste is not permitted.

5. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

6. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

B. Provide evidence that the demolition materials have been received at a legal disposal, recycle, reuse or salvage location. Such proof may include truck weight slips from an approved disposal facility or documentation of transfer of title. Transport of all materials off site shall be in accordance with applicable Department of Transportation Regulations. All materials leaving the site shall become the property of the Contractor.

3.8 CLEANING

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

END OF SECTION

SECTION 13281

ASBESTOS ABATEMENT

PART 1 GENERAL

1.1 GENERAL PROVISIONS

A. The work covered in this section includes the minimum procedures that must be employed during abatement of asbestos-containing materials (ACM).

1. ACM, defined as greater or equal to than (≥) one percent (1%) asbestos, have been identified which will be impacted by the planned renovations and demolition and require abatement.

B. Refer to other Sections of these Specifications to determine the type and extent of work therein affecting the work of this Section, whether or not such work is specifically mentioned herein.

1.2 RELATED INFORMATION

A. Related Sections

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

2. Section 01350, Health and Safety

3. Section 13282, Lead Paint Awareness

4. Section 13283, Hazardous Materials Management

5. Section 13286, PCB-Contaminated Building Materials Abatement

B. Related Drawings

1. Tighe & Bond Drawings – Hazardous Building Materials Abatement Plans, Figures 1.1-1.6

1.3 PROJECT DESCRIPTION

A. The scope of work to be performed includes, but is not limited to, the proper removal, handling, and disposal of ACM proposed to be by the renovation and/or demolition activities during the Project at the Site. Refer to Table 13281 at the end of this Section for base bid asbestos-containing materials scheduled to be removed.

B. Abatement work procedures of identified ACM roofing is not included in this specification as the roof will not be removed at this time.

C. The Asbestos Abatement Contractor (the "Contractor") must review all related documents and drawings and conduct site visits as required to develop a comprehensive understanding of ACM required to be removed at the Site.

D. Base Bid asbestos abatement work will include, but not limited to, the ACM located in Table 13281: Base Bid Scope of Work located at the end of this Section.

1. The quantities in the tables are provided to establish the order of magnitude of the abatement project.

2. Actual quantities may vary.

3. It is the sole responsibility of the Contractor to visit the site, review the Contract Documents and determine the quantities of ACM to be removed when developing their Bid.

1.4 APPLICABLE CODES

A. The Contractor must be solely responsible for conducting this project and supervising all work in a manner that will be in conformance with all federal, state and local regulations and guidelines pertaining to asbestos abatement. Specifically, the Contractor must comply with the requirements of the following:

1. United States Environmental Protection Agency (EPA) National Emissions for Hazardous Air Pollutants (NESHAP) Regulations (Title 40 CFR, Part 61, Subpart M)

2. EPA Asbestos Hazard Emergency Response Act (AHERA) Regulations (Title 40 CFR, Part 61, Subpart E)

3. Occupational Safety and Health Administration (OSHA) Asbestos Regulations (Title 29 CFR, Part 1926.1101)

4. Department of Public Health (CTDPH) Standards for Asbestos Abatement (Sections 19a-332a-1 to 19a-332a-16 of the Connecticut General Statutes (CGS))

5. CTDPH Division of Health Circular Letter #2003-10, Regulatory Interpretation Regarding Intact Removal of Non-Friable ACM

6. CTDPH Licensing and Training Requirements for Persons Engaged in Asbestos Abatement and Asbestos Engineer Services (Sections 20-440-1 to 20-440-9 and Section 20-441 of the CGS)

7. Connecticut Department of Energy and Environmental Protection (CTDEEP) Regulations (Section 22a-209-8 (I) and Section 22a-220 of the CGS)

8. 2003 International Building Code as adopted by the 2005 State of Connecticut Building Code including the 2009, 2011, and 2013 amendments)

9. Connecticut State Fire Safety Code

10. Local health and safety codes, ordinances or regulations pertaining to asbestos remediation and all national codes and standards including American Society for Testing and Materials (ASTM), American National Standards Institute (ANSI), and Underwriter's Laboratories

1.5 EXEMPTIONS

A. This project was designed by a CTDPH licensed Asbestos Project Designer employed by Tighe & Bond, Inc.. (The “Designer”)

1. Any deviation from these specifications requires the written approval and authorization from the Designer.

B. Any deviations from CTDPH Standards for Asbestos Abatement Sections 19a-332a-1 through 19a-332a-16 must be requested in writing and submitted to the CTDPH for approval. It should be noted that these deviations do not necessarily provide the Contractor with a change order.

1.6 FINAL RE-OCCUPANCY AIR CLEARANCE

A. Following the completion of a final visual inspection and the encapsulation phase of the work, the Engineer must collect final re-occupancy clearance air samples inside the work area per CTDPH Standards for Asbestos Abatement regulations.

B. The Owner must be responsible for the payment of costs associated with the sampling and analysis of the initial final re-occupancy air clearance samples only.

1. The Contractor must be responsible for the payment of all costs associated with the collection and analysis of additional final clearance air samples if the first set of samples fail to satisfy the clearance criteria.

C. Contractor must not conduct demolition or other dust-generating activities during final re-occupancy air clearance sampling.

1.7 WORK SITE SAFETY PLAN

A. The Contractor must establish a set of emergency procedures and must post them in a conspicuous place at the work site. The safety plan should include provisions for the following:

1. Evacuation of injured workers.

2. Emergency and fire exit routes from all work areas.

3. Emergency first aid treatment.

4. Local telephone numbers for emergency services including ambulance, fire, and police.

a. A method to notify workers in the event of a fire or other emergency requiring evacuation of the building.

5. Confined space entry program (if required based on work).

B. The Contactor is responsible for training all workers in these procedures.

C. This Work Site Safety Plan may overlap with the requirements specified in Section 01350 Health and Safety Plan.

1.8 CONTROL OVER REMOVAL WORK

A. All Contractor work procedures must be monitored by the Contractor's "Competent Person" to ensure that areas outside the designated work locations do not become contaminated. The following controls must be implemented each working day to help ensure this:

1. Prior to work on any given day, the Contractor's designated "Competent Person" must evaluate job tasks with respect to safety procedures and requirements specified to prevent contamination of the building or the employees. This includes a visual survey of the work area and the decontamination enclosure systems.

B. The Contractor must maintain control of and be responsible for access to all work areas to ensure the following requirements:

1. Nonessential personnel are prohibited from entering the area.

2. All authorized personnel entering the work area must sign the work area entry log.

3. All authorized personnel entering the work area must read the "worker protection procedures" which are posted at the entry points to the enclosure system and must be equipped with properly fitted respirators and protective clothing.

4. All personnel who are exiting from the decontamination enclosure system must be properly decontaminated.

5. Asbestos waste that is taken out of the work area must be properly bagged and labeled in accordance with these specifications. The surface of the bags must be decontaminated. Asbestos waste leaving the enclosure system must be transported off site or immediately placed in locked, posted temporary storage containers on site, and be removed within 24-hours of the project conclusion.

6. Any material, equipment, or supplies that are brought out of the decontamination enclosure system must be cleaned and decontaminated by wet cleaning and/or HEPA vacuuming of all surfaces.

1.9 SITE SECURITY

A. The Contactor must be responsible for the security of regulated areas.

B. Post required asbestos abatement warning signs at entrances to the work area including the waste load out and worker decontamination chamber.

C. The Contractor must have a supervisor monitoring the entrance of the worker decontamination chamber during abatement work.

D. The Contractor must install plywood window barriers that will accommodate all negative pressure exhausts during abatement.

1. Install barriers in a manner that does not damage the window openings or detract from their aesthetic quality.

1.10 PERSONNEL PROTECTION

A. Prior to commencing work, instruct all workers in all aspects of personnel protection, work procedures, emergency procedures use of equipment including procedures unique to this project.

B. Respiratory protection must meet the requirements of OSHA as required in Title 29 CFR Parts 1910.134, 1926.11, and 1926.62.

C. A formal respiratory protection program must be implemented in accordance with Title 29 CFR, Part 1926.1101 and Title 29 CFR, Part 1910.134.

D. The Contractor must conduct exposure assessment air sampling, analysis and reporting to ensure the workers are using appropriate respiratory protection.

E. The Contractor must provide appropriate respiratory protection for each worker and ensure usage during potential asbestos exposure.

F. The Contractor must provide respirators from among those approved as being acceptable for protection by the National Institute for Occupational Safety and Health (NIOSH) under the provisions of Title 30 CFR, Part II.

G. The Contractor must provide an adequate supply of filter for respirators in use.

H. Minimum respiratory protection must be as follows:

Air borne Asbestos Level:	Required Respirator:
Not in excess of 1 f/cc (10 x PEL)	Half mask air purifying or otherwise as required respirator other than a disposable respirator, equipped with HEPA P 100 filters
Not in excess of 5 f/cc (50 x PEL)	Full facepiece air purifying respirator equipped with HEPA P 100 filters.
Not in excess of 100 f/cc (1,000 x PEL)	Tight-fitting powered air purifying respirator equipped with HEPA P 100 filters or any supplied air respirator operated in continuous flow mode.
Not in excess of 100 f/cc (1,000 x PEL)	Full facepiece supplied air respirator operated in pressure demand mode.
Greater than 1,000 f/cc (10,000 x PEL)	Full facepiece supplied air respirator unknown operated in pressure demand mode, equipped with an auxiliary positive pressure self-contained breathing apparatus

Note:

1. Respirators assigned for higher airborne fiber concentrations may be used at lower concentrations.
2. A high efficiency filter means a filter that is at least 99.97 percent efficient against mono-dispersed particles of 0.3 micrometers in diameter or larger.
3. In addition to the selection criteria in this section, the Contractor must provide a tight-fitting powered air purifying respirator equipped with high efficiency filters or a full facepiece supplied air respirator operated in the pressure demand mode equipped with HEPA egress cartridges or an auxiliary positive pressure self- contained breathing apparatus for all employees within the regulated area where Class I work is being performed for which a negative exposure assessment has not been produced and the exposure assessment indicates the exposure level will not exceed 1 f/cc as an 8-hour time weighted average. A full facepiece supplied air respirator operated in the pressure demand mode equipped with an auxiliary positive pressure self-contained breathing apparatus must be provided under such conditions if the exposure assessment indicates exposure levels above 1 f/cc as an 8-hour time weighted average.
4. If compresses air is used for supplied air respirators, this air will meet the requirements for grade D breathing air as described by the Compresses Gas association commodity Specification G-7.1. The compressor will be equipped with the necessary safety devices and sorbents/filters, and be situated to avoid entry of contaminated air. In addition, the compressor will be equipped with alarms to indicate failure or overheating, and additional alarms for indicating the presence of carbon monoxide. Airline couplings will be incompatible with outlets for other gas system to prevent inadvertent servicing of airline respirators with non-respirable gases.

I. The Contractor must provide and require all workers to wear protective clothing in Work Areas where asbestos fiber concentration exceed permissible limits established by the OSHA or where contamination exists. Protective clothing must include impervious coveralls with elastic wrists and ankles, head covering, gloves and foot coverings.

J. The Contractor must ensure that all authorized persons entering contaminated areas are equipped with proper respirators and protective clothing.

1.11 WORKER PROTECTION PROCEDURES

A. The Contractor must monitor airborne asbestos concentrations in the workers' breathing zone to establish conditions and work procedures for maintaining compliance with OSHA Regulations Title 29 CFR Part, 1910.1001 and Part 1926.1101.

B. The Contractor's air sampling professional must document all air sampling results and provide all air sampling reports as soon as feasible. OSHA air monitoring results must be posted at a conspicuous location at the job site.

C. All personnel air sampling must be conducted in accordance with methods described in OSHA standards Title 29 CFR 1910.1001 and 29 CFR 1926.1101.

D. The Contractor is responsible for complying with all additional OSHA regulations while performing work on this project.

1.12 WORKER QUALIFICATIONS, TRAINING, AND EDUCATION

A. Contractor is required to have a minimum OSHA Class I-certified Supervisor on-site at all times work is in progress.

B. Contractor is required to have an accredited asbestos Supervisor in each work area at all times work is in progress.

1. Supervisor must be fluent in English.

C. The Supervisor must be thoroughly familiar and experienced with asbestos abatement and related work, and must enforce the use of all safety procedures and equipment. He/she must be knowledgeable of EPA, OSHA, CTDPH, and NIOSH requirements and guidelines.

D. Enforce strict discipline and good working order at all times among employees, and do not employ any person not skilled in the work assigned, nor anyone who has not received documented notice of the hazards of asbestos abatement, formal training in the use of respirators, safety procedures, equipment, clothing, and work procedures. All workers must be licensed in accordance with applicable state regulations.

1.13 SUBMITTALS

A. The Contractor will submit the following submittals to the Engineer 10 calendar days prior to the commencement of asbestos removal work:

1. Submit copies of all notifications, permits, applications, licenses and like documents required by federal, state, or local regulations obtained or submitted in proper fashion.

2. Submit a schedule to the Owner and the Engineer that defines a timetable for executing and completing the project, including work area preparations, removal, cleanup, decontamination, and final clearance air monitoring (if applicable).

3. Submit the current valid State of Connecticut Asbestos Abatement Contractor license and certificate of insurance.

4. Submit the name and address of the waste hauling contractor and waste facility to be used. Also submit current valid operating permits and certificates of insurance for the waste transporter and waste facility.

5. Submit the plans and construction details for the construction of the decontamination systems and the isolation of the work areas as may be necessary for compliance with this specification and applicable regulations. Plans must include locations of negative air machines for each work area.

6. Submit the training, medical, respirator fit test records, and CTDPH license of each employee who may be on the Site.

7. If the Contractor's CTDPH-licensed Asbestos Abatement Supervisor is not conducting OSHA-required employee exposure monitoring, submit the qualifications of the air sampling professional that the Contractor proposes to use for this project for this task.

8. Submit detailed product information on all materials and equipment proposed for asbestos abatement work on this project.

9. Submit pertinent information regarding the qualifications of the Project Supervisor (competent person) for this project, as well as a list of past projects completed.

10. Submit a chain-of-command for the project.

11. Submit a site-specific Emergency Action Plan for the project. The Emergency Action Plan may include emergency procedures to be followed by Contractor personnel to evacuate the building, hospital name and phone number, most direct transportation route from the Site, emergency telephone numbers, etc. If this information is contained within an Emergency Action Plan prepared by the Site's General Contractor, a copy must be submitted for review.

12. Submit a written site-specific Respiratory Protection Program for employees for the Work, including make, model and NIOSH approval numbers of respirators to be used at the Site (if applicable).

13. Submit the proposed electrical safeguards to be implemented by a State of Connecticut-licensed electrician, including but not limited to: location of transformers, Ground Fault Circuit Interrupter (GFCI) outlets, lighting, and power panels necessary to safely perform the Work, including a description of electrical hazards and a safety plan for common practices in the work area. This may also include a safety plan for temporary lighting, extension cords, and other powered equipment used in the work area (locations, daily inspections, etc.).

14. Submit the proposed worker orientation plan that, at a minimum, includes a description of asbestos hazards and abatement methodologies, a review of worker protection requirements, and the outline of safety procedures.

15. Provide the Engineer draft copies of waste profiles and Waste Shipment Records (WSR) prior to Owner / accepting waste facility signing.

B. The Contractor will submit the following to the Engineer during the course of the work:

1. Daily results of all personal air sampling.

2. Certificates, training, medical, and fit-test records for new employees to start work (24 hours in advance of work).

3. Contractor site logs and containment sign-in sheets.

4. Revised Notification, if any.

5. Copies of (WSR) for waste that leaves the site.

C. The following must be submitted to the Engineer within forty-five days of the completion of work:

1. Completed copies of WSR.

2. Remaining personal air sampling results and site logs.

1.14 NOTIFICATIONS, POSTINGS, SUBMITTALS, AND PERMITS

A. The Contractor must make the required written notifications as follows prior to commencement of asbestos abatement.

1. CTDPH Asbestos Abatement Notification

a. Submit Notification prior to the commencement of abatement totaling greater than or equal to (≥) 10 linear feet (LF) and/or 25 square feet (SF) to the CTDPH.

b. The notification and associated fee is required 10-calendar days prior to the start of the abatement project and/or phase. The Contractor must include the notification fees in their base bid price.

c. The notification must be submitted to the following agency:

1) Connecticut Department of Public Health
410 Capital Avenue
MS #51 AIR
P.O. Box 340308
Hartford, CT 06134

d. The minimum information in the notification to the CTDPH must include:

1) Name and address of building Owner/Operator

2) Building location

3) Building size, age, and use

4) Asbestos quantity

5) Work schedule, including proposed start and completion date

6) Asbestos removal procedures to be used

7) Name and location of disposal site for generated asbestos waste, residue, and debris

2. EPA NESHAP Asbestos Abatement Notification

a. Submit Notification prior to the commencement of asbestos abatement associated with the building demolition.

b. The notification is required 10-working days (excluding weekends and federal holidays) prior to the start of the abatement project and/or phase.

c. The notification must be submitted to the following agency:

1) Asbestos NESHAP Coordinator
EPA Region 1
5 Post Office Square
Suite 100
Boston, MA 02109

d. The minimum information in the notification to the EPA must include:

1) Name and address of building Owner/Operator

2) Building location

3) Building size, age, and use

4) Asbestos quantity

5) Work schedule, including proposed start and completion date

6) Asbestos removal procedures to be used

7) Name and location of disposal site for generated asbestos waste, residue, and debris

1.15 DEFINITIONS

A. Abatement: Procedures to control fiber release from ACM; includes removal, encapsulation, and enclosure.

B. Air Monitoring: The process of measuring the total airborne fiber concentration of an area, or a person.

C. Amended Water: Water to which a surfactant (wetting agent) has been added.

D. Asbestos: The name given to a number of naturally occurring fibrous silicates. This includes the serpentine forms and the amphiboles, and includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite, or any of these forms, which have been chemically-altered.

E. Asbestos Felt: A product made by saturating felted asbestos with asphalt, or other suitable bindery, such as a synthetic elastomer.

F. Asbestos Fibers: Those particles with a length greater than five (5) microns and a length to diameter ratio of 3:1 or greater.

G. Asbestos Project Designer: The State of Connecticut-licensed Asbestos Engineer – Project Designer for this project is John R. Hobbins (License No. 000353).

H. Asbestos Work Area: A regulated area as defined by OSHA Title 29 CFR, Part 1926.1101 where asbestos abatement operations are performed, which is isolated by physical barriers to prevent the spread of asbestos dust, fibers, or debris. The regulated area must comply with requirements of regulated area for demarcation, access,

respirators, prohibited activities, competent persons and exposure assessments and monitoring.

I. Caulking: Resilient mastic compound often having a silicone bituminous or rubber base; used to seal cracks, fill joints, and prevent leakage. Typical applications: around windows, and doors. Caulking is at joints between two dissimilar materials. (i.e., masonry to wood, masonry to steel)

J. Clean Room: An uncontaminated area or room, which is a part of the worker decontamination enclosure with provisions for storage of worker street clothes and protective equipment.

K. Clearance Sampling: Final air sampling performed aggressively after the completion of the abatement project in a regulated area. Air samples collected by the air sampling professional having a total airborne fiber concentration of less than 0.010 fibers per cubic centimeter of air (fibers/cc) in each of five (5) samples collected inside the containment will denote acceptable clearance sampling by Phase Contrast Microscopy (PCM), or five air samples collected inside the containment by the air sampling professional having an average asbestos concentration of less than 70 structures per square millimeter (S/mm^2) of air will denote acceptable clearance sampling for Transmission Electron Microscopy (TEM).

L. Competent Person: As defined by OSHA Title 29 CFR, Part 1926.1101, a representative of the Abatement Contractor who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure. The Competent Person has authority to take prompt corrective measures, and to eliminate such hazards during asbestos removal. The Competent Person must be properly trained in accordance with EPA's Model Accreditation Plan (MAP).

M. Containment – An enclosure within the building which establishes a contaminated area and surrounds the location where ACM and/or other toxic or hazardous substance removal is conducted, and establishes a Control Work Area.

N. Curtained Doorway: A device to allow ingress and egress from one area to another while permitting minimal air movement between the areas. Two curtained doorways spaced a minimum of six feet apart can form an airlock.

O. Dampproofing: Application of a water impervious material to surface (such as a wall) to prevent penetration of moisture, typically at foundation or below grade surface.

P. Decontamination Enclosure System: A series of connected areas, with curtained doorways between any two adjacent areas, for the decontamination of workers and equipment. A decontamination enclosure system always contains at least one airlock and is adjacent and connected to the regulated area, where possible.

Q. Encapsulant: A liquid material which can be applied to ACM, which controls the possible release of asbestos fibers from the materials either by creating a membrane over the surface (bridging encapsulant), or penetrating the material and binding its components together (penetrating encapsulant).

R. Engineer: Third Party Engineering/Environmental Consultant.

S. Equipment Room: Any contaminated area or a room that is part of the worker decontamination enclosure with provisions for storage of contaminated clothing and equipment.

T. Fixed Object: Unit of equipment or furniture in the work areas that cannot be removed from the work area.

U. Friable Asbestos Materials: Any material that contains more than 1% asbestos by weight, that can be crumbled, pulverized or reduced to powder by hand pressure.

V. Glazing Compound: Any compound used to hold window glass in place, also referred to as putty, or glazier's putty. Is not field-applied, usually installed during manufacture of windows.

W. HEPA Filter: High Efficiency Particulate Air (HEPA) filter in compliance with ANSI Z9.2.

X. HEPA Vacuum Equipment: Vacuum equipment fitted with a HEPA filter system for filtering the effluent air from the unit.

Y. Movable Object: Unit of equipment of furniture in the work area that can be removed from the work area.

Z. Negative Air Pressure Equipment: A portable local exhaust system equipped with HEPA filtration used to create negative pressure in a regulated area (negative with respect to adjacent unregulated areas), and capable of maintaining a constant, low velocity air flow into regulated areas from adjacent unregulated areas.

AA. NESHAP: National Emissions Standard for Hazardous Air Pollutants regulations enforced by the EPA.

BB. Permissible Exposure Limit (PEL): The maximum total airborne fiber concentration to which an employee is allowed to be exposed. The new limit established by OSHA Title 29 CFR, Part 1926.1101 is 0.1 fibers per cubic centimeter (fibers/cc) as an eight (8)-hour time-weighted average (TWA), and 1.0 fibers/cc averaged over a sampling period of 30 minutes as an Excursion Limit. The Contractor must be responsible for maintaining work areas in a manner that this standard is not exceeded.

CC. Project Monitor: A professional capable of conducting air monitoring and analysis of schemes. This individual should be an industrial hygienist, an environmental scientist, or an Engineer with experience in asbestos air monitoring and worker protection equipment and procedures. This individual should have demonstrated proficiency in conducting air sample collection in accordance with OSHA Title 29 CFR, Parts 1910.1001 and 1926.1101.

DD. RCRA: The Resource Conservation and Recovery Act (EPA Title 40 CFR, Parts 260 - 265).

EE. Regulated Area: An area established by the employer to demarcate where Class I, II, and III asbestos work is conducted and any adjoining area where debris and waste from such asbestos work accumulate, and a work area within which total airborne fiber concentrations exceed, or there is a reasonable possibility that they may exceed the PEL.

FF. Shower Room: A room between the clean room and the equipment room in the work decontamination enclosure with hot and cold running water and suitably arranged for employee showering during decontamination. The shower room is located in an airlock between the contaminated area and the clean area.

GG. Totally Enclosed Manner – A manner that will ensure no exposure of human beings or the environment to a concentration of asbestos.

HH. Transport Vehicle – A motor vehicle or rail car used for the transportation of cargo by any mode. Each cargo-carrying body (e.g., trailer, railroad freight car) is a separate transport vehicle.

II. Waterproofing: Material, usually a membrane or applied compound (tar/mastic), used to make a surface impervious to water, includes concealed conditions (applications around doors, windows, and in wall cavities); sometimes combined with felts.

PART 2 MATERIALS AND EQUIPMENT

2.1 MATERIALS

A. Deliver all materials in the original packages, containers, and/or bundles bearing the name of the manufacturer, brand name, and product technical description.

B. Damaged or deteriorating materials must not be used and must be removed from the premises. Material that becomes contaminated with asbestos must be decontaminated or disposed of as asbestos waste.

C. Polyethylene (poly) sheet in a roll size to minimize the frequency of joints must be delivered to job site with factory label indicating 4 or 6 mils.

D. Poly disposable bags must be true 6-mil with preprinted labels.

E. Tape or adhesive spray must be capable of sealing joints in adjacent poly sheets and for attachment of poly sheets to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions, including use of amended water.

F. Surfactant (wetting agent) must consist of 50 percent poly ether and 50 percent polyoxyethylene ester, or equivalent, and must be mixed with water to provide a concentration of one ounce surfactant to five gallons of water or as directed by manufacturer.

G. Impermeable containers are to be used to receive and retain any asbestos-containing or contaminated materials until disposal at an acceptable disposal site. (The containers must be labeled in accordance with OSHA Standard Title 29 CFR, Part 1926.1101.) Containers must be both air and watertight.

H. Labels and signs, as required by OSHA Standard Title 29 CFR, Part 1910.1001 will be used.

I. Encapsulant must be bridging or penetrating type which has been found acceptable to the Owner. Usage must be in accordance with manufacturer’s printed technical data.

J. Disposal labels must be preprinted on self-adhesive labels with the generator name, abatement site and contractor's name and address. Labels must not be photocopied and applied with spray adhesive.

2.2 TOOLS AND EQUIPMENT

A. Provide suitable tools for asbestos removal, encapsulation and enclosure.

B. The Contractor Personnel exposure surveillance per OSHA requirements.

C. The Contractor must have available sufficient inventory on site for materials necessary for the job including protective clothing, respirators, filter cartridges, poly sheeting of proper size and thickness, tape, and air filters.

D. The Contractor is responsible for securing electrical power before the commencement of asbestos removal.

E. The Contractor must provide temporary electrical power sources such as generators (when required).

F. The Contractor must have available shower stalls and sufficient hose length and a drain system equipped with 5-micron filters.

G. Exhaust air filtration system units must contain HEPA filter(s) capable of sufficient air exhaust to create negative pressure of 0.02 inches of water within the enclosure with respect to the outside area.

1. Equipment must be checked for proper operation by smoke tubes or a differential pressure gauge before the start of each shift and at least twice during the shift.

2. Adequate exhaust air must be provided for a minimum of four air changes per hour within the enclosure.

3. No air movement system or air filtering equipment must discharge unfiltered air outside.

H. Vacuum units, of suitable size and capacities for project, must have HEPA filter(s) capable of trapping and retaining at least 99.97 percent of all monodispersed particles of 0.3 micrometers in diameter or larger.

I. The Contractor will have reserve exhaust air filtration system units in order to maintain negative air filtration in the event that a unit malfunctions during use.

J. The Contractor must have available and use recording manometers to monitor pressure differential between the work area and occupied areas of the building. A minimum negative pressure differential of 0.02 inches of water column must be maintained.

K. The Contractor must have available spray equipment capable of mixing a wetting agent with water and capable of generating sufficient pressure and volume and having sufficient hose length to reach all areas with asbestos.

L. HEPA filtered local exhaust ventilation must be utilized during the installation of enclosures and supports where ACM may be disturbed.

PART 3 EXECUTION

3.1 PRE-CONSTRUCTION MEETING

A. At least one week prior to the start of work, a Pre-Construction meeting will be scheduled and must be attended by the Contractor and any Sub-Contractors. The assigned Contractor Site Supervisor must also attend this meeting.

B. The Contractor must present a detailed project schedule and project submittals prior to the Pre-Construction Meeting. Variations, amendments, and corrections to the presented schedule will be discussed, and the Owner and the Engineer will inform the Contractor of any scheduling adjustments for this project.

C. Following the Pre-Construction meeting, the Contractor must submit a revised schedule (if needed) no later than one week after the meeting.

3.2 INTERIOR WORK AREA PREPARATION – GENERAL

A. Provide GFCI devices, temporary power, and temporary lighting installed in compliance with the applicable electrical codes. All temporary installations are to be made by a licensed electrician, installed outside work areas, and permitted as required.

B. Shut down electrical power, including receptacles and light fixtures. Lock and tag out circuits associated with the electrical components in the work area(s). Under no circumstances during the abatement procedures will existing lighting fixtures be permitted to be energized.

C. Shut down and/or isolate heating, cooling, and ventilation air systems or zones to prevent contamination and fiber dispersal to other areas of the structure. Lock and tag out circuits associated with heating and cooling units. During the work, vents within the work area must be sealed with duct tape and poly sheeting.

D. Seal off all openings, including but not limited to windows, corridors, doorways, skylights, ducts, grills, diffuser, and any other penetration of the work areas, with poly sheeting minimum of 6-mil thick sealed with duct tape. This includes doorways and corridors which will not be used for passage during work areas and occupied areas. Install five-micron water filtration socks in all floor drains prior to sealing.

E. Where friable ACM is present, establish worker decontamination facility, critical barriers and negative air filtration prior to conducting pre-cleaning activities. Pre-clean fixed objects within the work areas, using HEPA vacuum equipment and/or wet cleaning methods as appropriate, and enclose with minimum 6-mil plastic sheeting sealed with duct tape.

F. Pre-clean movable objects within the work areas, using HEPA vacuum equipment and wet cleaning methods as appropriate. Do not use methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters.

G. After HEPA vacuum pre-cleaning, conduct work area preparation in accordance with this Specification section.

H. Where fixed walls are not used, one layer of 6-mil poly sheeting will be applied to a rigid framework of wood, metal, or PVC.

I. Install two layers of 4-mil poly wall sheeting over all wall surfaces and critical barrier (where wall materials are not being removed as ACM). All overlaps must be sealed with tape or spray adhesive.

J. Cover all floors in the work area with two layers of 6-mil poly sheeting (where flooring materials are not being removed as ACM). Extend the poly flooring a minimum of 12 inches up the walls. Ensure that the wall sheeting overlaps the floor sheeting from the top.

K. Where containments extend above suspended or fixed ceilings, remove ceiling as necessary to perform installation of isolation barriers and wall sheeting above ceiling. Wall sheeting must extend to the top of each wall in ceiling plenum areas.

L. Maintain emergency and fire exits from the work area, or establish alternative exits satisfactory to fire officials.

M. Create pressure differential between work areas and occupied areas by the use of acceptable negative air pressure equipment. The Contractor must ensure required negative air pressure is obtained throughout the containment and the total volume of air within the work area is changed every 15 minutes.

N. Install a manometer within each work area where Class I work will be performed to monitor the negative pressure within the work area.

O. Post all approaches to each work area with Asbestos Warning signs. Warning signs must be of size and type that are easily readable and are visible from all approaches to the work areas and adhere to regulatory requirements.

P. Establish a work area access control log at the entrance to each work area. Authorized personnel entering the work area must sign in upon entering the area and sign out upon exiting the area.

Q. Establish airless spray equipment within each work area. Airless spray equipment must be capable of reaching all areas within each work area.

3.3 CONTIGUOUS PERSONNEL DECONTAMINATION SYSTEM

A. The Contractor must establish contiguous to each work area, where feasible, a personnel decontamination system consisting of equipment room, shower room and clean room in series. Access between the contaminated and uncontaminated areas must be through this decontamination enclosure only. The decontamination system must be constructed of two layers of 6-mil poly sheeting. Pre-fabricated "pop-up" decontamination chambers will not be permitted on this project.

B. Access between rooms in decontamination system must be through double flap-curtained openings. Clean room, shower room and equipment room within decontamination system must be completely sealed ensuring that the sole source of air flow through this area originates from uncontaminated areas outside the work area.

C. The shower unit must be equipped with an adequate supply of warm water. A shower filtration pump containing two 5-micron sock filters or the best available technology must be installed to filter shower water. Filtered shower water must be discharged into sanitation drains and must not be discharged into storm drains or onto floor or ground surfaces.

D. The shower room must have soap and an adequate supply of drying towels. Provide an adequate number of shower units in accordance with OSHA Title 29 CFR, Part 1926.1101.

3.4 REMOTE PERSONAL DECONTAMINATION SYSTEM

A. The Contractor must establish a remote personnel decontamination system where contiguous decontamination systems are not feasible. The use of a remote decontamination unit must be indicated on the State Notification of Asbestos Abatement. Access between the contaminated and uncontaminated areas must be through this decontamination enclosure only. The decontamination system must be constructed of two layers of 6-mil poly sheeting. Pre-fabricated "pop-up" decontamination chambers will not be permitted on this project.

B. Access between rooms in decontamination system must be through double flap-curtained openings. Clean room, shower room and equipment room within decontamination system must be completely sealed ensuring that the sole source of air flow through this area originates from uncontaminated areas outside the work area.

C. The shower unit must be equipped with an adequate supply of warm water. A shower filtration pump containing two 5-micron sock filters or the best available technology must be installed to filter shower water. Filtered shower water must be discharged into sanitation drains and must not be discharged into storm drains or onto floor or ground

surfaces.

D. The shower room must have soap and an adequate supply of drying towels. Provide an adequate number of shower units in accordance with OSHA Title 29 CFR, Part 1926.1101.

3.5 WASTE LOAD OUT SYSTEMS

A. The Contractor may elect to establish waste load out systems, where feasible, attached to the work areas.

B. Waste load out systems must consist of a minimum of two chambers that are of suitable size for transporting waste out of the work area.

C. Waste load out systems must be constructed of two layers of 6-mil poly sheeting.

D. Access between rooms in the waste load out system must be through double flap-curtained openings. The waste load out system must be used for decontaminating waste containers, bags, bundles, etc. prior to removal from the work area and transporting waste from the work area to the non-work area.

E. Persons working inside the contaminated work area are not permitted to pass from the work area to the non-work area through the waste load out system. Persons inside the contaminated work area must not be permitted to enter into the clean area of the waste load out system.

F. Waste load out systems must remain sealed at all times except during decontamination of waste containers and transport of waste from the work area to the non-work area.

3.6 WORK AREA EXHAUST

A. Install sufficient quantity of portable HEPA-filtered exhausts to maintain each interior work area, including the Decontamination Facility, under negative pressure, and to reduce airborne asbestos fiber concentrations.

B. The exhaust(s) must be capable of providing at least an inward velocity through any unsealed openings, including the Personnel Decontamination Facility, of at least 100 feet per minute (fpm), and provide at a minimum, four full air changes per hour throughout the work area.

C. All exhaust air must pass through a HEPA filter before being discharged to the exterior of the building.

D. Deficient air flows must be immediately reported and work ceased until the situation is corrected.

E. Exhaust system must be operated constantly from the time that preparation is completed, until final air clearance certification is obtained.

F. The Contractor must install plywood window barriers (or similar) that will accommodate all negative pressure exhausts during abatement.

1. Install barriers in a manner that does not damage the window openings or detract from their aesthetic quality.

3.7 EXTERIOR WORK PREPARATION – GENERAL

A. Where exterior non-friable ACM is to be removed outdoors, post asbestos abatement warning signs and erect temporary barricades to create regulated areas. Regulated areas

should be kept clear of any persons not fully trained and protected against exposure.

B. Maintain an operable remote worker decontamination system in accordance with Part 3.4 of this Section.

C. Maintain a work area access control log for each exterior work area.

3.8 ASBESTOS REMOVAL PROCEDURES - GENERAL

A. The Contractor must have a designated "Competent Person" on the job at all times to ensure establishment of a proper enclosure system and proper work practices throughout the project. At a minimum, the Contractor's Competent Person must perform or supervise the following duties, as applicable:

1. Ensure the integrity of the containment(s) or enclosure(s).

2. Set up procedures to control entry to and exit from the enclosure(s).

3. Supervise employee exposure monitoring.

4. Ensure that employees set up, use and remove engineering controls, use work practices and personal protective equipment in compliance with applicable regulations and the technical specifications.

5. Ensure that employees use the worker decontamination facilities and observe decontamination procedures.

6. Supervise and direct abatement activities in a manner that meet the intent of this technical specification and applicable regulations.

7. Quantify asbestos waste generated during the project.

8. Perform final visual inspections in conjunction with the Asbestos Project Monitor.

B. Abatement work will not commence until all work area preparation is completed in accordance with this Specification and accepted by the Engineer.

C. Spray asbestos materials with amended water using airless spray equipment or apply approved removal wetting agent to reduce the release of fibers during removal operation. The Engineer will pre-approve use of amended water as the wetting agent.

D. Spraying of amended water must be adequate to allow the ACM to absorb the amended water. Actual removal of ACM must not be allowed until all ACM has become adequately wet.

E. Fill disposal containers as removal proceeds, seal filled containers before moving to waste load out system. Wet clean each container thoroughly, double bag, drum or use other approved containerization methods, and apply a caution label before moving to holding area.

F. Remove and containerize all visible accumulations of asbestos-containing and/or asbestos-contaminated debris.

G. Solidify all liquid waste prior to containerization for disposal.

H. Sealed disposal containers and all equipment used in the work area must be included in the cleanup and must be removed from work areas, via the waste load out system at an appropriate time in the cleaning sequence.

I. At any time during asbestos removal, should the Project Monitor and/or competent person suspect contamination of areas outside the work area(s), all abatement work must stop until steps to decontaminate these areas and eliminate causes of such contamination are completed. Unprotected individuals must be prohibited from entering suspected contaminated areas until air sampling and visual inspections certify decontamination.

J. Upon acceptance of the work area by the Engineer, the Contractor must apply an even coating of bridging encapsulant to all exposed surfaces contained within the work area. Apply encapsulant in accordance with manufacturer's recommendation.

K. Re-occupancy air monitoring must be performed within each work area where greater than three linear feet or three-square feet of ACM has been removed.

3.9 ASBESTOS REMOVAL PROCEDURES – PIPE INSULATION, PIPE FITTING INSULATION, AND PIPE SEALANT

A. Prior to the removal of any non-friable products, the Contractor must ensure the work area is prepped in accordance with Sections 3.2, 3.3, 3.5, and 3.6 of this Specification.

B. Utilizing an airless sprayer, the Contractor must adequately wet all pipe insulation, pipe sealant, and/or pipe fitting insulation.

C. Remove the insulation and other friable ACMs utilizing hand tools. Utilize scrub pads and/or wire brushes to remove insulation residue from exhaust ducts and pipes.

D. Utilize nylon scrub pads to remove insulation and other friable ACM residue from pipes and other metal components. Remove all contaminated fiberglass or non-ACM insulation a minimum of six inches from pipe sealant and/or mudded pipe fitting.

E. The work area(s) are subject to a final visual inspection and re-occupancy air monitoring.

3.10 ASBESTOS REMOVAL PROCEDURES – WALL PANEL ADHESIVE

A. Prior to the removal of any non-friable products, the Contractor must ensure the work area is prepped in accordance with Sections 3.2, 3.3, 3.5, and 3.6 of this Specification.

B. Perform selective demolition to remove all wall paneling, lighting fixtures, conduit, piping or other miscellaneous materials that may be in the way of abatement. Decontaminate removed items.

C. The Contractor must wet the materials with amended water or detergent solution, so that entire surface is wet.

1. Do not allow to puddle or run off into other areas.

2. If a detergent is used, use in strict accordance with manufacturer's instructions.

D. Wall paneling and gypsum wallboard associated with ACM adhesive must be disposed of as contaminated ACM.

1. Continuously mist surfaces in area where working with amended water, removal encapsulant, or detergent solution.

2. Wet any debris generated as necessary to keep continuously wet.

E. Remove materials, place in boxes or wrap in felt, and place in labeled disposal bags.

1. At the Contractor's option, material may be placed directly into durable leak-tight containers.

3.11 ASBESTOS REMOVAL PROCEDURES – FLOOR TILE AND VINYL STAIR TREAD AND ASSOCIATED MASTICS/ADHESIVES

A. Prior to the removal of any non-friable flooring products, the Contractor must ensure the work area is prepped in accordance with Sections 3.2, 3.3, 3.5, and 3.6 of this Specification.

B. The Contractor must wet the floor with amended water or detergent solution, so that entire surface is wet.

1. Do not allow to puddle or run off into other areas.

2. If a detergent is used, use in strict accordance with manufacturer's instructions.

Allow time for humidity and water or removal encapsulant to loosen carpet and/or floor tiles prior to removal.

C. The Contractor must keep floor continuously wet throughout removal operation.

D. All layers of flooring, adhesives, mastics, felts, levelers, and plywood subfloors must be removed as asbestos waste.

E. Where asbestos-containing floor tile exists below carpeting or plywood floors, the carpeting and plywood must be removed in-conjunction with floor tile removal procedures.

F. Remove flooring using a manual, powered spade, and/or stripping machine.

1. Continuously mist floor in area where work is occurring with amended water, removal encapsulant, or detergent solution.

2. Wet any debris generated as necessary to keep continuously wet.

3. Keep floor continuously wet where tile has been removed until after completion of heavy adhesive residue removal.

G. Remove flooring materials, stack, place in boxes or wrap in felt, and place in labeled disposal bags.

1. At the Contractor's option, tiles may be placed directly into durable leak-tight containers.

H. Following removal of flooring on areas with concrete slab floors, a layer (or layers) of asbestos-containing mastic/adhesive will remain on the concrete slab floor.

1. The adhesive may be removed using shot/bead blast machines and/or mechanical grinders.

2. The Contractor must be responsible for removing all mastic from under floor leveling compounds and must remove and dispose of the floor leveling compounds and underlying mastic as asbestos.

3. The waste captured by media-blast operations must be removed from the blast tract hopper, wetted, and disposed of as asbestos waste.

3.12 ASBESTOS REMOVAL PROCEDURES – PORTABLE SAFES, VAULT DOOR, AND CEMENTITIOUS WALL PANELING

A. The Contractor may elect to remove materials as a non-disturbance activity following CTDPH guideline for intact removal of non-friable ACM.

B. Associated pins, screws, bolts, and adhesives must be removed and disposed of as contaminated ACM.

C. The Contractor must disconnect and dispose of materials as ACM, while ensuring that the materials are not disturbed by unbolting/unscrewing and disconnecting.

D. The Contractor must remove materials intact and directly wrap entire unit or dismantled components with two-layers six mil poly sheeting bundles affixed with Asbestos Danger Class 9 DOT (Asbestos NA2212.RQ) stickers for proper disposal.

E. If the above materials cannot be removed as a non-disturbance activity, the Contractor must ensure the work area is prepped in accordance with the requirements of Section 3.2 Interior Work Area Preparation – General and 3.3 contiguous personal decontamination system.

3.13 ASBESTOS REMOVAL PROCEDURES – WINDOW GLAZING (EXTERIOR REMOVAL)

A. The Contractor must ensure the work area is prepped in accordance with Sections 3.4 and 3.7 of this Specification.

B. Minimum specific requirements relative to the removal of asbestos-containing exterior window systems are as follows:

1. The Contractor may elect to remove entire window systems in their entirety with associated intact glazing including sashes, and glass. Separation of glazing from window systems is not required; however, waste will be disposed of in accordance with the most stringent regulatory requirements.

2. Prior to the removal of window systems, the contractor must install 6-mil polyethylene (poly) critical barriers over the interior of window openings to isolate exterior abatement work areas from interior of building. Critical barriers must be maintained during exterior abatement activities and repaired if necessary.

3. Install six-mil poly drop cloths extending a minimum of 10 feet from the exterior wall of the building Extend poly sheeting outward from the base of the structure in order to collect debris when working from higher elevations and to ensure that exterior ground surfaces are protected. Install single six-mil poly critical barriers over any louvers, vents or penetrations into the building interior within or directly adjacent to the regulated area.

4. If scaffolding is utilized, floor planks must clean of debris at end of shift.

5. If boom lifts are utilized, workstations (buckets) must be lined with poly sheeting to act as catch system to contain falling debris during removal activities.

6. Post asbestos abatement warning signs and erect temporary barricades to create regulated areas. Regulated areas should be kept clear of any persons not fully trained and protected against exposure.

7. Provide barricade tape, warning signs, and additional proper safety precautions under work areas in case of falling objects.

8. The contractor must sufficiently wet ACM with removal encapsulant, amended water, or a detergent solution to minimize dust during work.

9. Remove exterior ACM using hand tools, and place directly into durable leak-tight containers, or two 6-mil poly bags, and properly label.

10. It is required to pull back metal window frames to access any hidden glazing for removal.

11. Surrounding surfaces, such as brick facade, must be thoroughly cleaned with HEPA-filter vacuum equipment, and wet-wiped to remove all visible dust and debris. Place waste directly into durable leak-tight containers, or two 6-mil poly bags, and properly label.

12. Unless an Approved Alternate Work Practice (AWP) is obtained, removal of the glazing materials using mechanical equipment must be performed within a negative pressure containment if removal methods render the ACM glazing friable.

13. Window openings must be sealed to an extent to be entry/weather-tight on the lower level and 1st floor and weather-tight on floor 2. At a minimum, ½ inch plywood and 2'x4' wood framing must be utilized.

    a. Install barriers in a manner that does not damage the window openings or detract from their aesthetic quality.

3.14 ASBESTOS REMEDIATION PROCEDURES – SPOT REPAIR GLOVEBAG

A. Where less than three (3) linear/square feet of ACM is to be removed by glove bag operation, post asbestos abatement warning signs and erect temporary barricades to create regulated areas. Regulated areas should be kept clear of any persons not fully trained and protected against exposure.

B. Provide GFCI devices and temporary power installed in compliance with the applicable electrical codes.

1. Pre-clean surrounding surfaces with HEPA filtered vacuum cleaner.

2. Install one layer of 6-mil poly sheeting on the surface below the glove bag removal location.

3. Install 6-mil glove bag in accordance with OSHA Title 29 CFR, Part 1926.1101. Place hand tools within glove bag prior to removal. Attach HEPA filtered vacuum cleaner to vacuum port in glove bag. Attach wand from pump sprayer through port in glove bag.

4. The Competent Person must smoke test glove bag and document test results in their log book.

5. Post all approaches to each work area with Asbestos Warning signs. Warning signs must be of size and type that are easily readable and are visible from all approaches to the work areas.

6. Wet materials with water from pump sprayer prior to removal. Remove ACM utilizing hand tools.

7. Following removal activities, decontaminate hand tools and place in pouch of glove bag. Twist pouch to seal off from remainder of glove bag and tape.

8. Evacuate air from glove bag with HEPA vacuum. Twist glove bag and tape off. Cut top of glove bag above taped-off twist and drop directly into 6-mil disposal bag.

9. Surface subject to final visual inspection prior to removal of glove bag.

3.15 FINAL CLEANING AND ENCAPSULATION

A. Upon completion of gross removal of all ACM specified for removal, the Contractor must begin final cleaning of the effected work area. The final cleaning must include the following at a minimum:

1. The Contractor must HEPA-vacuum and wet wipe all surfaces contained within the work area during the final cleaning.

2. All tools or equipment that are not necessary for final cleaning must be decontaminated or bagged and removed from the work area enclosure.

3. The Contractor must begin final cleaning procedures at the furthest and highest most points from the personnel decontamination unit and move towards the unit. The Contractor must ensure that all exposed building components and or surfaces are thoroughly HEPA vacuumed and wet wiped.

4. The Contractor must HEPA vacuum and wet wipe any component specified to remain inside the work area enclosure.

5. The Contractor must thoroughly wet wipe all poly sheeting inside the work area enclosure.

B. Once all surfaces and components within the work area have been thoroughly cleaned, the Contractor's Competent Person must perform a visual inspection of all surfaces and components within the work area enclosure.

1. The Contractor's Competent Person must sign off on the work area stating that all abatement has been completed for that portion of work and that the work area has met final visual inspection requirements as outlined in ASTM E1368.

C. The Contractor's Competent Person must then request a final visual inspection to be performed by the Engineer.

1. The Engineer must visually inspect all surfaces and components in the work area for residual debris and or dust.

2. Additional cleaning must be performed at the Contractor's expense if the Engineer identifies visual debris and/or dust during the visual inspection.

3. Additional cleaning must be performed until the work area meets the Final Visual Inspection requirements outlined in ASTM E1368.

D. Upon acceptance of the work area by the Engineer, the Contractor must apply an even layer of bridging encapsulant to all surfaces contained within the work area.

1. The Engineer must verify the completeness of work area encapsulation.

3.16 WASTE PACKAGING AND REMOVAL PROCEDURE

A. The Contractor must strictly adhere to the requirements of this section for ACM waste packaging and transporting waste from the work area enclosure to the disposal dumpster.

B. Waste disposal bags and drums must be affixed with pre-printed OSHA warning labels, US Department of Transportation (DOT) labels, and NESHAP labels.

C. Each container of ACM waste must be made adequately wet prior to sealing the container. Bags must be sealed immediately following additional wetting procedures.

Bags of ACM waste must not be permitted to remain unsealed while in the work area enclosure.

D. Each bag of ACM waste must be double bagged during waste load out procedures. The following waste load out procedure must be strictly adhered to:

1. Wet wipe inner bag or drum to remove all ACM contamination. Ensure the inner bag is sealed.

2. Transport bag or drum to the equipment room located in the worker decontamination enclosure.

3. One worker, equipped with personal protective equipment, must be inside the clean room of the worker decontamination enclosure.

4. The worker in the clean room of the decontamination enclosure must open a 6-mil disposal bag and hold it open inside the shower room where the inner bag containing the ACM waste must be placed.

5. The outer bag must be sealed with duct tape inside the shower room.

6. The double bagged or drummed waste must be removed from the decontamination enclosure and waste generator labels must be immediately affixed to the outer bag or drum.

7. Waste generator labels must be printed self-adhering labels and must contain the Owner's name, the site location address, and the Contractor's name.

8. The properly labeled waste must be transported directly to the lined waste container.

9. The waste container must be double-lined with 6-mil poly sheeting.

10. OSHA warning signs must be secured to the waste container prior to any loading and unloading operations.

11. The waste container must be kept locked at all times other than loading and unloading.

3.17 DISPOSAL OF ASBESTOS AND ASBESTOS-CONTAMINATED WASTE

A. All disposal of asbestos-containing and or asbestos-contaminated material must be in compliance with requirements of the CTDEEP, CTDPH, and the EPA NESHAP regulations.

B. Disposal approvals must be obtained from the CTDEEP before commencing asbestos removal if waste will be disposed of in Connecticut.

C. Waste container storage locations must be pre-approved by the Owner and Engineer.

D. A copy of approved disposal authorization must be provided to the Owner and Engineer and any required federal, state or local agencies.

E. Copies of all waste facility receipts will be retained by the Engineer as part of the project file. The receipts will be signed by the waste facility operator on receipt, and the quantity of asbestos debris leaving the job site and arriving at the waste facility acknowledged.

F. All asbestos debris must be transported in covered, sealed vans, boxes or dumpsters, which are physically isolated from the driver by an airtight barrier. All vehicles must be properly licensed to meet DOT requirements.

G. Friable ACM waste must be placed in double-lined enclosed waste containers equipped with a lockable hasp. Waste containers must be posted with OSHA warning signs during loading and unloading.

H. All liquid waste generated during the work must be solidified. At no time will liquid wastes be permitted to be stored on site. Liquid waste generated during this project must be solidified prior to the end of each work shift.

I. Completed WSRs signed by the waste facility must be returned to the Owner and Engineer no later than 45 days from the time the waste was transported off-site. Completed waste shipment records that are not received by the Owner within 35 days must require the Contractor to begin tracking the waste. The Contractor must notify the Owner of intentions on tracking the waste.

J. The Contractor must take appropriate actions as outlined in Title 40 CFR, Part 61 NESHAP regulations when completed WSR are not forwarded to the Owner or Engineer within 45 days from the time the waste was transported off-site.

3.18 RE-OCCUPANCY AIR CLEARANCE SAMPLING

A. After the visual inspection is completed and all surfaces in the abatement area have dried, the Engineer must conduct final re-occupancy air clearance sampling.

1. Aggressive air monitoring will be used.

2. Selection of location and of samples must be the responsibility of the Engineer.

3. Air monitoring volumes must be sufficient to provide a detection limit of 0.0027 f/cc (fibers per cubic centimeter of air) for Phase Contrast Microscopy (PCM) using NIOSH-approved method. For air clearance by Transmission Electron Microscopy (TEM), air monitoring volumes must be sufficient to provide a detection limit of 0.005 s/cc (structures per cubic centimeter of air) using the AHERA method.

B. Areas that do not comply with the Standard for Cleaning for Initial Clearance must continue to be cleaned by, and at, the Contractor's expense until the specified Standard of Cleaning is achieved, as evidenced by results of air testing results, as previously specified.

1. The above must include all Engineer-based costs.

C. The Contractor must properly schedule abatement work and other site activities at appropriate times and locations to prevent cross-contamination and/or dust in areas where the Asbestos Project Monitor will conduct air sampling.

D. After the pre-sealant, visual inspection has passed and all surfaces in the abatement area have dried, re-occupancy air clearance monitoring will be performed.

1. The primary and secondary barriers, worker decontamination enclosure, and negative air filtration units must remain in place.

2. At no time can tools, ladders, vacuums, or waste remain inside the work area enclosure during final air clearance sampling.

3.19 ENGINEER AIR SAMPLING RESPONSIBILITY

A. Air sampling may be conducted by the Engineer to ascertain the integrity of the controls that protect the building from asbestos contamination. Independently, the Contractor must monitor air quality within the work area to ascertain the protection of employees, and to comply with OSHA regulations.

B. The Engineer's project monitor may collect and analyze air samples during the following period:

1. Abatement Period – If required, or retained for this service, the Engineer's project monitor must collect samples on a daily basis during the work period. A sufficient number of area samples must be collected outside of the work area, at the exhaust of the negative pressure system, and outside of the building to evaluate the degree of cleanliness or contamination of the building during removal. At the discretion of the Asbestos Project Monitor, additional air samples may be collected inside the work area and decontamination enclosure system.

C. The Engineer's project monitor must collect and analyze air samples during the following period:

1. Post-Abatement Period – If required, the Asbestos Project Monitor must conduct air sampling following the final cleanup phase of the project, once the "no visible residue" criterion, as established by the Asbestos Project Monitor, has been met and the work area has been encapsulated by the Contractor. A minimum of 5 air samples will be collected inside the work area utilizing aggressive methods to comply with the CTDPH Standards for Asbestos Abatement, sections 19a-332a-12.

D. Final re-occupancy air clearance sampling must be conducted by the Asbestos Project Monitor in accordance with the requirements of the CTDPH using the following methods:

1. TEM - For work areas containing greater than 500 linear feet or 1,500 square feet of ACM, post-abatement analysis of the samples to determine if reoccupancy clearance standards have been met must be conducted by TEM. A minimum of five (5) samples must be collected inside containment utilizing aggressive methods to comply with State of Connecticut DPH Standard for Asbestos Abatement sections 19a-332a-12, and 19a-332a-13. An asbestos abatement project may be considered complete when the <u>average</u> concentration of asbestos fibers of 5 air samples collected within the work area and analyzed by the TEM method in Appendix A of 40 CFR Part 763 subpart E is less than 70.0 structures per square millimeter (s/mm^2) of filter surface or is not statistically significantly different, as determined by the Z-test calculation found in Appendix A of 40 CFR Part 763, subpart E, from the average asbestos concentration of 5 air samples collected at the same time outside the work area and analyzed in the same manner, and the average asbestos concentration of the three field blanks described in Appendix A of 40 CFR Part 763, subpart E, is below the filter background level, as defined in Appendix A of 40 CFR Part 763 subpart E, of 70 s/mm^2.

2. PCM – For work areas containing less than 500 linear feet or 1,500 square feet of ACM, post abatement analysis of the samples to determine if reoccupancy clearance standards have been met must be conducted by PCM. A minimum of

five (5) samples must be collected inside containment utilizing aggressive methods to comply with State of Connecticut DPH Standard for Asbestos Abatement sections 19a-332a-12, and 19a-332a-13. The project may be considered complete when the results of samples collected in the work area and analyzed by phase contrast microscopy using the most current NIOSH method 7400, to show that the concentration of fibers for each of the five samples is less than or equal to a limit of quantification for PCM (0.010 fibers per cubic centimeter of air).

E. The Owner must be responsible for payment for the initial final clearance air sampling performance, only.

1. If the first set of samples fails to satisfy the re-occupancy criteria, the Contractor must be responsible for payment of all costs associated with the additional final clearance air sampling and analysis.

F. The Asbestos Project Monitor must provide continual evaluation of the air quality of the building during removal, using their best professional judgment in respect to the CTDPH guideline of 0.010 fibers/cc, and the background air quality established during the pre-abatement period.

G. Pre-abatement and abatement air samples must be collected as required to obtain a minimum volume of 1,200 liters. Samples must be analyzed by PCM NIOSH 7400 Method.

3.20 ENGINEER'S INSPECTION RESPONSIBILITIES

A. The Engineer must conduct inspections throughout the progress of the abatement project. Inspections must be conducted to document the abatement work progress, as well as the procedures and practices employed by the abatement Contractor.

B. The Engineer may perform the following inspections during the abatement activities:

1. Pre-commencement Inspection. Pre-commencement inspections will be performed at the time requested by the Contractor. The Engineer must be informed 24-hours prior to the time the inspection is needed. If deficiencies are noted during the pre-commencement inspection, the Contractor must perform the necessary adjustments to obtain compliance.

2. Work Area Inspections. Work area inspections must be conducted on a daily basis at the discretion of the Engineer. During the work inspections, the Engineer must observe the Contractor's removal procedures, verify barrier integrity, monitor negative air filtration devices, assess project progress, and if deficiencies are noted, inform the abatement Contractor of specific remedial activities.

C. The Engineer must perform the following inspections during the abatement activities:

1. Pre-sealant Inspection. Upon the request of the Contractor, the Engineer will conduct a pre-sealant inspection. The Engineer must be informed 24-hours prior the time that the inspection is needed. The pre-sealant inspection must be conducted after completion of the initial cleaning procedures, but prior to encapsulation. The pre-sealant inspection must verify that all ACM and residual debris have been removed from the work area. If the Engineer identifies residual dust or debris during the pre-sealant inspection, the Contractor must comply with the request of the Engineer to render the area “dust free.”

2. Final Visual Inspection. Upon request of the abatement Contractor, the Engineer will conduct a final visual inspection. Following the removal of the inner layer of poly sheeting, but prior to final air clearance, the Engineer must conduct a final visual inspection inside the work area. If residual dust or debris is identified during the final inspection, the Contractor must comply with the request of the Engineer to render the area "dust free."

Table 13281- LIST OF ASBESTOS-CONTAINING MATERIALS

MATERIAL	LOCATION(S)	APPROXIMATE QUANTITY	COMMENTS
Pipe Insulation, Pipe Fitting Insulation, and Pipe Sealant	Office Building (basement)	280 LF	2”- 6” Diameter Pipe
Floor Tile and Associated Mastics, Adhesives, Levelers, Felts, and Plywood Flooring	Office Building (floors 1-2)	13,000 SF	Flooring exists in multiple layers and is located below carpeting and plywood in multiple areas
Vinyl Stair Tread and Adhesive	Office Building (northeast stairwell)	300 SF	Diamond pattern
Safe/Vault Insulation	Office Building - 1st and 2nd Floors (file rooms and southeast offices)	3 Portable Safes and 1 Vault Door (2nd floor file room)	Assumed intact removal of ACM insulation within steel safe walls and vault door
Exterior Window Glazing (metal framed)	Office Building - 2nd Floor Conference Rooms (north)	2 EA = 60 LF	Glazing exists within aluminum window frames. Resulting window opening must be secured.
Brown Wall Panel Adhesive	Machine Shop Office and Locker Room	3,500 SF	Removal includes associated gypsum walls and wood paneling
Interior/Exterior Window Glazing	Machine Shop Office (exterior windows)	4 EA	Remove and dispose of window units in entirety. Resulting window opening must be secured.
Cement Board Wall Paneling	Machine Shop Office (furnace room)	300 SF	Intact removal
Pipe Insulation	Maintenance Garage (paint booth)	10 LF	2” Diameter Pipe. Northeast wall
Capstone Caulk	Office Building Roof	100 LF	Remove, Dispose and Re-caulk
Legend ACM = Asbestos-Containing Materials SF = Square Feet LF = Linear Feet, EA = Each			

* Approximate quantities included in this Table are provided to establish an order of magnitude for the amount of material that must be abated. Actual quantities may vary. It is the sole responsibility of the Contractor to visit the site, review the Contract Documents and determine the quantities of materials to be removed when developing their Bid.

END OF SECTION

SECTION 13282

LEAD PAINT MANAGEMENT

PART 1 GENERAL

1.1 SUMMARY OF WORK

A. Work in this Section includes requirements for worker protection and waste disposal related to the work involving surfaces containing lead.

B. The procedures referenced herein must be utilized during required renovation work specified elsewhere in the Construction Documents that might impact identified lead-containing paint (identified as detectable concentrations of lead) and/or lead-based paint (LBP / identified as containing greater than or equal to (≥) 0.50% lead by weight or 1.0 mg/cm^2 of lead). LBP and/or lead-containing paint and associated building components are noted in Table 1 located at the end of this Section.

1. Refer to Section 13286 PCB-Containing Building Materials Abatement for coordination of paints containing lead which are also known or presumed to contain PCB concentrations <50 and/or ≥50 parts per million (ppm).

C. Components containing LBP at the site require stabilization prior to repainting. The work covered in this Section includes the minimum procedures that shall be employed during management of the LBP.

D. Renovation and/or demolition work impacting lead-containing paint and LBP may result in dust and debris exposing workers to levels of lead above the Occupational Safety and Health Administration's (OSHA) Action Level.

E. Worker protection, training, and engineering controls referenced herein must be strictly adhered to, until completion of exposure assessment with results indicating exposures below the OSHA Action Level.

F. Construction activities disturbing surfaces with lead-containing paint or LBP that are likely to be employed, such as demolition, sanding, grinding, welding, cutting and burning, have been known to expose workers to levels of lead in excess of the OSHA Permissible Exposure Limit (PEL).

G. Any construction activities including cutting, grinding, abrading, etc. which impact the lead-containing and/or LBP surfaces must follow the requirements found in this Section.

1.2 RELATED INFORMATION

A. Related Sections

1. Section 01325, Health and Safety Plan

2. Section 02225, Selective Demolition

3. Section 13286, PCB-Containing Building Materials Abatement

B. Related Documents

1. Hazardous Building Materials Assessment Report, dated October 2022 by Tighe & Bond, Inc.

2. Hazardous Building Materials Abatement Plans, Figures 1.1 - 1.6.

1.3 DEFINITIONS

A. The following definitions relative to lead-containing or LBP as used in this Section are offered:

1. ACTION LEVEL (AL): The allowable employee exposure, without regard to use of respiratory protection, to an airborne concentration of lead over an eight (8) hour time weighted average (TWA), as defined by OSHA. The current action level is thirty micrograms per cubic meter of air (30 $\mu g/m^3$).

2. AREA MONITORING: The sampling of lead concentrations, which is representative of the airborne lead concentrations that may reach the breathing zone of personnel potentially exposed to lead.

3. BIOLOGICAL MONITORING: The analysis of a person's blood and/or urine, to determine the level of lead concentration in the body.

4. CHANGE ROOM: An area provided with separate facilities for clean protective work clothing and equipment and for street clothes, which prevents cross- contamination.

5. COMPETENT PERSON: A person employed by the Contractor who is capable of identifying existing and predictable lead hazards in the surroundings or working conditions, and who has authorization to take prompt corrective measures to eliminate them as defined by OSHA.

6. ENGINEER - The third-party Engineering/Environmental consultant for the project.

7. EXPOSURE ASSESSMENT: An assessment conducted by an employer to determine if any employee may be exposed to lead at or above the action level.

8. HIGH EFFICIENCY PARTICULATE AIR (HEPA): A type of filtering system capable of filtering out particles of 0.3 microns diameter from a body of air at 99.97% efficiency or greater.

9. LEAD: Refers to metallic lead, inorganic lead compounds and organic lead soaps. Excluded from this definition are other organic lead compounds.

10. LEAD-CONTAINING PAINT: Refers to paints, glazes, and other surface coverings containing detectable levels of lead.

11. LEAD WORK AREA: An area enclosed in a manner to prevent the spread of lead dust, paint chips, or debris resulting from lead-containing paint disturbance.

12. LEAD-BASED PAINT: Refers to paints, glazes, and other surface coverings containing a toxic level of lead.

13. PERMISSIBLE EXPOSURE LIMIT (PEL): The maximum allowable limit of exposure to an airborne concentration of lead over an eight (8) hour time weighted average (TWA), as defined by OSHA. The current PEL is fifty micrograms per cubic meter of air (50 $\mu g/m^3$). Extended workdays lower the PEL by the formula: PEL equals 400 divided by the number of hours of work.

14. PERSONAL MONITORING: Sampling of lead concentrations within the breathing zone of an employee to determine the 8-hour time weighted average concentration in accordance with Title 29 CFR, Part 1926.62 and Title 29 CFR, Part 1910.1025. Samples must be representative of the employee's work tasks.

Breathing zone must be considered an area within a sphere with a radius of 18 inches and centered at the nose or mouth of an employee.

15. RESOURCE CONSERVATION RECOVERY ACT (RCRA): RCRA establishes regulatory levels of hazardous chemicals. There are eight (8) heavy metals of concern for disposal: arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. Six (6) of the metals are typically found in paints, excluding selenium and silver.

16. TOXIC LEVEL OF LEAD: A level of lead, when present in dried paint or plaster, contains more than 0.50% lead by dry weight as measured by atomic absorption spectrophotometry (AAS) or 1.0 mg/cm^2 as measured by on-site testing utilizing an x-ray fluorescence analyzer. (Term is specific to State of CT regulations and HUD guidelines only)

17. TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP): The U.S. Environmental Protection Agency (USEPA) required sample preparation and analysis for determining the hazard characteristics of a waste material.

1.4 REGULATIONS AND STANDARDS

A. The following regulations, standards, and ordinances of federal, state, and local agencies are applicable and made a part of this specification by reference:

1. American National Standards Institute (ANSI) ANSI Z88.2 – Respiratory Protection

2. Code of Federal Regulation (CFR)

a. Title 29 CFR, Part 1910.134 - Respiratory Protection

b. Title 29 CFR, Part 1910.1025 - Lead

c. Title 29 CFR, Part 1926.62 - Lead in Construction Interim Final Rule

d. Title 29 CFR, Part 1926.59 - Hazard Communication in Construction

e. Title 40 CFR, Part 263 - Transporters of Hazardous Waste

f. Title 40 CFR, Part 268 - Lead Disposal Restrictions

3. State of Connecticut Department of Energy and Environmental Protection (CTDEEP)

a. Guidance for the management and disposal of lead-contaminated materials generated in the lead abatement renovation and demolition industries.

4. Underwriters Laboratories, Inc. (UL)

a. UL586 – High Efficiency Particulate Air Filter Units

1.5 QUALITY ASSURANCE

A. Hazard Communication Program

1. The Contractor must establish and implement a Hazard Communication Program as required by Title 29 CFR, Part 1926.59.

B. Compliance Plan (Site Specific)

1. The Contractor must establish a written compliance plan, which is specific to the project site, to include the following:

   a. A description of work activity involving lead including equipment used, material included, controls in place, crew size, employee job responsibilities, operating procedures, and maintenance practices.

   b. Methods of engineering controls to be used to control lead exposure.

   c. The proposed technology the Contractor will implement in meeting the OSHA PEL.

   d. Air monitoring data documenting the source of lead emissions.

   e. A detailed schedule for implementing the program, including documentation of appropriate supply of equipment, etc.

   f. Proposed work practice which establishes proper protective work clothing, housekeeping methods, hygiene facilities, and practices.

   g. Worker rotation schedule, if proposed, to reduce TWA.

   h. A description of methods for informing workers of potential lead exposure.

C. Medical Examinations

1. Before exposure to lead contaminated dust, provide workers with a comprehensive medical examination as required by Title 29 CFR, Part 1910.1025 and Title 29 CFR, Part 1926.62.

2. The examination may not be required if adequate records show that employees have been examined as required by Title 29 CFR Part 1926.62 within the last year.

3. Medical examination must include, at a minimum, approval to wear respiratory protection and biological monitoring.

D. Training

1. The Contractor must ensure that workers are trained to perform lead-containing or LBP disturbing activities and disposal operations prior to the start of work in accordance with Title 29 CFR, Part 1926.62.

E. Respiratory Protection Program

1. The Contractor must furnish each employee required to wear a negative pressure respirator with a respirator fit test at the time of initial fitting and at least once every 12 months thereafter as required by Title 29 CFR, Part 1926.62.

2. The Contractor must establish a Respiratory Protection Program in accordance with ANSI Z88.2, Title 29 CFR, Part 1910.134, and Title 29 CFR, Part 1926.62.

1.6 SUBMITTALS

A. The Contractor must submit to the Engineer the following submittals prior to start of work:

1. Copies of all notifications, permits, applications, licenses and like documents required by federal, state and local regulations obtained or submitted in proper fashion.

2. Copies of medical records for each employee to be used on the project, including copies of each workers' initial blood lead level and zinc protoporphyrin level.

3. Record of successful respirator fit testing performed by a qualified individual within the previous year, for each employee to be used on this project with the employee's name and social security number with each record.

4. Proposed respiratory protection program for employees throughout all phases of the job, including make, model and National Institute of Occupational Safety and Health (NIOSH) approval numbers of respirators to be used.

5. Written description, for the Engineer's review and acceptance, of all proposed procedures, methods, or equipment to be utilized including those that differ from the Contract Specifications. Include manufacturers' specifications on any equipment not specified for use by this Section; in all instances, the Contractor must comply with all applicable federal, state, and local regulations.

6. List of all supervisors and workers intended to be assigned to the project and current certificates of training.

7. The name and address of Contractor's blood lead testing lab, OSHA-CDC listing, and Certification in the State of Connecticut.

8. The name and address of Contractor's personal air monitoring and waste disposal lead testing laboratories including certification(s) of American Industrial Hygiene Association (AIHA) accreditation for heavy metal analysis and listing of relevant experience in air and debris lead analysis.

9. Safety Data Sheets (SDS) on all materials and chemicals to be used on the project.

10. Name, address, and ID number of the hazardous waste hauler, and proposed disposal site.

11. Name, address, and ID number of the proposed construction debris site.

B. The Contractor must submit to the Engineer the following submittals during the job:

1. Daily results from personal air samples.

2. Medicals, certificates, and fit test 24 hours in advance of any new employee starting on the project.

3. Copies of laboratory analysis for waste characterization sampling conducted prior to disposal.

C. The Contractor must submit to the Engineer the following submittals upon completion of the work:

1. Copies of manifests and receipts acknowledging disposal of all hazardous and non-hazardous waste material generated by the Contractor from the project showing delivery date, quantity, and appropriate signature of landfill's authorized representative.

1.7 PERSONAL PROTECTION

A. Exposure Assessment

1. The Contractor must determine if any worker will be exposed to lead at or above the OSHA Action Level.

2. The exposure assessment must identify the level of exposure a worker would be subjected to without respiratory protection.

3. The exposure assessment must be achieved by obtaining personal monitoring samples representative of a full shift of at least 8-hour TWA.

4. During the period of the exposure assessment, the Contractor must institute the following procedures for protection of workers:

   a. Protective clothing must be utilized.

   b. Respiratory protection.

   c. Change areas must be provided.

   d. Hand washing facilities and shower.

   e. Biological monitoring.

   f. Training of workers.

B. Respiratory Protection

1. The Contractor must furnish appropriate respirators approved by NIOSH/MSHA for use in atmospheres containing lead dust.

2. Respirators must comply with the requirements of Title 29 CFR, Part 1926.62.

3. Workers must be instructed in all aspects of respiratory protection.

4. The Contractor must have an adequate supply of HEPA filter elements and spare parts on site for all types of respirators in use.

5. The minimum respirator protection for use during paint removal or demolition of components and surfaces with lead-containing paint or LBP must be the 1/2 mask air purifying respirator with high efficiency filters for exposures (not in excess of 500 $\mu g/m^3$ or 10 x PEL).

C. Protective Clothing

1. Personal protective clothing must be provided for all workers, supervisors, and authorized visitors entering the work area.

2. Each worker must be provided with a minimum of two (2) complete disposable coverall suits.

3. Removal workers must not be limited to two (2) suits, and the Contractor must supply additional suits as necessary.

4. Under no circumstances must anyone entering the lead removal area be allowed to re-use a contaminated disposable suit.

5. Disposable coveralls, such as TYVEK® suits, and other personal protective equipment (PPE) must be donned prior to entering the lead control area. A change room must be provided for workers to put on suits and other personal protective equipment with separate areas to store their street clothes.

6. Eye protection for personnel engaged in lead operations must be furnished when the use of a full-face respirator is not required.

7. Goggles with side shields must be worn when working with power tools or a material that may splash or fragment, or if protective eye wear is specified on the SDS for a particular product to be used on the project.

1.8 PERSONAL MONITORING

A. General. The Contractor is required to perform the personal air sampling activities during lead-containing paint or LBP disturbing work. The results of such sampling must be posted, provided to individual workers, and submitted to the Owner on a daily basis, as described herein.

B. Sampling. Samples must 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 unchanged but must be taken every time there is a change in removal operations, either in terms of the location or the type of work. Sampling will be used to determine eight-hour TWA. The Contractor is responsible for personal sampling as outlined in OSHA Standard Title 29 CFR, Part 1926.62 and Title 29 CFR, Part 1910.1025.

C. Sampling Results. Air sampling results must be reported to individual workers in written form no more than 48 hours after the completion of a sampling cycle. The reporting document must list each sample's result, sampling time and date, personnel monitored and their social security numbers, flow rate, sample duration, sample yield, cassette size, and analysts' name and company, and must include an interpretation of the results. Air sample analysis results will be reported in micrograms/cubic meter ($\mu g/m^3$).

D. Testing Laboratory. The Contractor's testing lab must be participating in AIHA's Environmental Lead Laboratory Accreditation Program (ELLAP). The Contractor must submit to the Engineer for review and acceptance, the name and address of the laboratory, certification(s) of AIHA participation, a listing of relevant experience in air lead analysis, and presentation of a documented Quality Assurance and Quality Control Program.

PART 2 PRODUCTS

2.1 GENERAL

A. Any substitution in materials, equipment, or methods to those specified must be approved by the Engineer prior to use. Any requests for substitution must be provided in writing to the Engineer. The request must clearly state the rationale for the substitution.

2.2 MATERIALS AND PRODUCTS

A. Deliver all materials in the original packages, containers, or bundles bearing the name of the manufacturer and the brand name and product technical description.

B. Damaged or deteriorating materials must not be used and must be removed from the premises.

C. The Contractor must have available sufficient inventory or dated purchase orders for materials necessary for the job including protective clothing, respirators, filter cartridges, polyethylene sheeting of proper size and thickness, tape, and air filters.

D. Materials

1. Polyethylene sheet in a roll size to minimize the frequency of joints must be delivered to job site with factory label indicating 6-mil. A minimum of one layer of 6-mil polyethylene sheeting must be used for ALL lead removal work areas.

2. Polyethylene disposable bags must be 6-mil. Tie wraps for bags must be plastic, five (5) inches long (minimum), pointed and looped to secure filled plastic bags.

3. Tape or adhesive spray will be capable of sealing joints in adjacent polyethylene sheets and for attachment of polyethylene sheet to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions, including use of amended water.

4. Impermeable containers are to be used to receive and retain any lead containing or contaminated materials until disposal at an acceptable disposal site. The containers must be labeled in accordance with EPA and DOT standards.

2.3 TOOLS AND EQUIPMENT

A. Provide suitable tools for all lead disturbing operations.

B. The Contractor must have available power cables or sources such as generators (where required).

PART 3 EXECUTION

3.1 WORKER PROTECTION/TRAINING

A. The Contractor must provide appropriate training, respiratory and other personal protection, and biological monitoring for each worker and ensure proper usage during potential lead exposure and the initial exposure assessment.

B. Workers who will perform procedures must have training in accordance with the requirements of OSHA Title 29 CFR, Part 1926.62.

C. Prepare the work areas according to the following general sequence of procedures to ensure that proper dust containment and protection systems are installed before any work which could generate lead dust.

D. Plastic Sheeting must be polyethylene or equivalent with a thickness of at least 6-mil for all applications.

E. Erect barricades, post access restriction signs, and maintain a Decontamination Facility.

F. Obtain formal approval from Engineer of all preparation work and containment areas before commencing removal of items containing LBP. Engineer must be given at least 48 hours notification of the intent to start removal work in any work area.

3.2 CONTRACTOR'S RESPONSIBILITIES

A. The Contractor is responsible for establishing and maintaining controls referenced within this section.

B. The Contractor is also responsible for conducting work in accordance with applicable federal, state, and local regulations as referenced herein.

3.3 WORKER HYGIENE PRACTICES

A. Required during initial exposure assessment and if results of air sampling are above OSHA Action Level.

B. Work Area Entry: Workers must don personal protective equipment prior to entering work area, including at a minimum, disposable coveralls, gloves, eye protection, and proper footwear.

C. Work Area Departure: While in the work area, workers must remove all gross contamination, debris, and dust from disposable coveralls and proceed to Decontamination Facility for implementation of proper worker decontamination.

D. Hand washing Facilities: All workers must wash their hands and faces upon leaving the work area.

E. Equipment: All equipment used by workers inside the work area must be wet wiped or bagged for later decontamination before removal from the work area.

F. Prohibited Activities: Under no circumstances must workers eat, drink, smoke, chew gum, or tobacco in the work area.

G. Shock Hazards: The Contractor is responsible for using safe procedures to avoid electrical hazards. All temporary electrical wiring will be protected by ground fault circuit interrupters (GFCI).

3.4 LEAD WORK AREA

A. Required during initial exposure assessment and if results of air sampling are above OSHA Action Level.

B. The Contractor must place warning signs at all entrances and exits from the work area. Signage must be a minimum of 20" x 14" and must state the following:

DANGER

LEAD WORK AREA

MAY DAMAGE FERTILITY OR THE UNBORN CHILD

CAUSES DAMAGED TO THE

CENTRAL NERVOUS SYSTEM

DO NOT EAT, DRINK OR SMOKE IN THIS AREA

C. The Contractor must designate a change room as specified in this Section. The change room must be adjacent to the lead work area and Decontamination Facility. The change room must have separate storage facilities for street clothes to avoid cross contamination.

D. The Contractor must provide potable water for hand and face washing and provide a portable shower unit.

E. The Contractor must place 6-mil polyethylene drop cloths on floor/ ground surfaces prior to beginning removal work to facilitate clean-up.

3.5 WORK PROCEDURES FOR PAINT REMOVAL

A. Prior to the removal of the defective LBP, the Contractor shall ensure that work area preparation has been conducted in accordance with this Section.

B. If chemical stripper is utilized to remove defective LBP, the Contractor shall ensure the following:

1. Apply chemical stripper in quantities and for duration’s specified by manufacturer.

2. Remove lead paint from surface down to bare substrate with no trace of residual pigment. Use sanding and hand scraping to supplement chemical methods as required to remove residual pigment.

3. Apply neutralizer compatible with substrate and chemical agent to substrate following removal in accordance with manufacturer's instructions.

4. Protect adjacent surfaces from damage by chemical removal methods.

5. Maintain a portable eyewash station in the work area.

C. If wet scraping/wet sanding is utilized to remove defective LBP, the Contractor shall ensure the following:

1. Remove loose paint from work surfaces by first "misting" the surface and then carefully scraping any loose paint. Keep surfaces wet during the entire operation.

2. Remaining paint edges can be "feathered" by wet sanding with damp sandpaper.

D. The following paint removal methods are prohibited:

1. The use of heat guns, or any blasting media, or power tool assisted grinding, sanding, cutting, or wire brushing without the use of HEPA vacuum dust collection systems to remove LBP is prohibited.

2. Welding or torch cutting of materials painted with LBP is prohibited. Where cutting, welding, rivet busting, or torch cutting of materials is required, prior removal of the LBP shall be performed in the affected area.

3. Dry scraping.

E. Collect debris in the work area throughout the operation using wet clothes or a HEPA vacuum.

F. Upon completion of properly preparing the surface for encapsulation, the surfaces shall be wet wiped and HEPA vacuumed clean of debris and dust.

G. Apply appropriate encapsulation for the surface to be painted. SDSs and other product information for the encapsulant to be utilized for the work shall be submitted to the Owner and approved prior to the work commencing.

H. Protect adjacent surfaces from debris and/or dust contamination.

I. Maintain appropriate wash station within the work area.

3.6 DECONTAMINATION PROCEDURES

A. All workers must wash upon leaving the work area. Wash facilities will be provided by the removal Contractor in compliance with 29 CFR 1926.51(f) and 20 CFR 1926.62. This wash facility will consist of, at least, warm running potable water, towels, soap, and a HEPA vacuum. Upon leaving the work area, each worker will HEPA vacuum gross debris from work suit, remove and dispose of work suit, wash and dry face and hands, and vacuum clothes. Do not remove lead chips or dust by blowing or shaking of clothing. Wash water shall be collected, filtered, and disposed of in accordance with all applicable regulations.

B. Operational shower facilities, remote to the work area, shall be provided by the Contractor and maintained in working order such that any worker has the option of decontamination by showering. If air monitoring data by the Contractor or State's Inspector or risk assessor shows that employee exposure to airborne lead exceeds 50 $\mu g/m^3$, the following mandatory showering conditions apply:

1. Street clothes cannot be worn into the work area and shall be stored in the change room. Workers shall wear disposable suits over clothing that stays on site in the

change room, or disposable suits over nylon or Tyvek undergarments, or coveralls that are laundered on site.

2. Street shoes cannot be worn into the Lead Control Area and shall be stored in the change room. Dedicated shoes that do not leave the Lead Control Area may be utilized. Work shoes covered by disposable booties may be utilized if the shoes are cleaned after each use and kept in the change room.

3. Showers must be utilized.

C. Ensure proper entry and exit procedures for all persons who enter and leave the Lead Control Area. Remove and containerize all visible accumulations of paint chips and associated dust and debris daily. During clean-up, utilize rags and sponges wetted with lead-specific detergent and water to minimize dust levels.

3.7 WORK AREA CLEAN UP

A. Mop heads, wastewater, broom heads, rags and sponges used in the clean-up activity shall be disposed of as hazardous lead-bearing waste.

B. Sealed disposal containers and all equipment used in the work area shall be included in the clean-up.

C. Clean all surfaces with HEPA filtered vacuum equipment prior to wet cleaning all surfaces within regulated area.

D. Upon completion of lead paint removal, the Contractor shall begin final cleaning. The Contractor shall clean and remove any contaminated material, equipment, or debris including polyethylene sheeting from the work area. The polyethylene sheeting shall first be sprayed or misted with water for dust control, the resulting removal debris removed, and then the sheeting shall be folded in upon itself.

1. Large Debris. Large debris from demolition shall be wrapped in polyethylene sheeting at least 6 mil thick, sealed with heavy duty duct tape, and transported to dumpsters.

2. Small Debris. Prior to picking up or collecting small debris, the surfaces of this debris shall be sprayed with a fine mist of water. The debris shall be picked up, collected, and placed into a single plastic bag, at least 6 mils thick. The bags shall not be overloaded, shall be securely sealed, and shall be transported to dumpster for disposal. Dry sweeping is not permitted in the work area.

3. Sheeting. Removal of floor polyethylene sheeting and critical barriers shall begin at the corners and be folded into the middle to contain the dust or residue. All collected polyethylene sheeting shall be placed in 6-mil polyethylene bags for proper disposal.

4. HEPA Vacuuming. Once the 6-mil polyethylene sheeting is removed from the work area, cleaning shall begin with a thorough HEPA vacuuming of all surfaces, proceeding down the walls and including window trim and floors. The floor shall be vacuumed last, beginning at the farthest corners from the entrance to the work area. HEPA vacuuming shall again be performed as noted above, after the following tri sodium phosphate (TSP) wash.

5. Lead Specific Detergent. The Contractor shall next wash or mop the same surfaces with a lead specific detergent such as TSP (five percent) and allow

surfaces to dry. The Contractor shall prepare and use detergents according to the manufacturer's instructions. The manufacturer's recommended coverage shall be followed. Then a second HEPA Vacuuming of the surfaces shall be performed by the Contractor, as described above. By the conclusion of the cleaning phase, all visible dust and debris shall have been completely removed.

6. Hygiene, Cleaning, Equipment and Supplies. Special attention shall be given to personal hygiene and the cleaning of supplies and/or equipment. All mop heads; sponges and rags shall be replaced or changed daily, at a minimum.

3.8 WASTE DISPOSAL

A. Caution Note for Contractors: All materials, whether hazardous or non-hazardous, must be disposed of in accordance with all laws and the provisions of any or all applicable federal, state, county, or local regulations and guidelines. It is the sole responsibility of the Contractor to assure compliance with all laws and regulations relating to this disposal.

B. All waste materials generated during abatement and renovations which involves lead-containing or LBP in the waste must have characterization sampling via TCLP method performed by the Contractor or must be assumed to be lead hazardous waste and must be packaged and disposed of as such.

1. Results must be furnished to the Owner and Engineer.

C. Metal components with lead-containing paint or LBP can be recycled at an approved recycling facility unless paint is assumed or confirmed to contain PCBs at levels that preclude recycling of this material under state or federal regulation.

D. Disposal of hazardous lead bearing material must be in compliance with the requirements of, and authorized by, the State of Connecticut, Department of Energy and Environmental Protection, Office of Solid Waste Management and with the requirements of the Resource Conservation and Recovery Act (RCRA).

E. The following materials are likely to leach lead at hazardous levels in excess of 5 mg/liter. The Contractor must containerize and dispose of the following materials as hazardous lead waste at an EPA approved treatment, storage, and disposal facility (if characterization sampling indicates waste is hazardous).

1. Paint chips.

2. Paint dust.

3. Dust from HEPA filters and from damp sweeping.

4. Rags, sponges, mops, HEPA filters, respirator cartridges, scrapers, and other materials used for testing, removal, and clean up.

5. Disposable work clothes and respirator filters.

6. Contents of HEPA vacuums used on this project.

F. The cost of the above disposal of hazardous waste is to be borne by the Contractor and provided at no additional cost to the Owner.

G. Contractor must wipe the following materials clean of all dust, dirt and debris and dispose of the material as construction debris:

1. Polyethylene sheeting used in removal activities other than chemical removal.

2. All surfaces adjacent to the work area.

H. Contractor must collect the wash water generated by the worker shower and wash facilities in 55-gallon drums and filter the water using a 2-stage filtration system composed of:

1. 5-micron porosity in-line cartridge particulate filter followed by activated carbon filter in-line cartridge

2. Hold the filtered water for testing prior to discharge to the sanitary sewer. Contractor must coordinate with the Owner and verify site specific lead levels allowed prior to discharge. Water that fails the testing criteria must be treated with sodium hydroxide, pH adjusted, and retested. If the second test does not meet the site-specific lead level, the Contractor must filter wastewater by reverse osmosis prior to testing and discharge to the sanitary sewer.

a. Contractor may alternatively and at their own expense, dispose of the wash water as a waste product based on the analytical testing results.

I. All hazardous lead waste must be containerized in accordance with Title 49 CFR, Part 178. Label and placard each container in accordance with Title 40 CFR, Part 1926.62 and Title 40 CFR, Part 172 to identify the type of waste and the date the container was filled.

J. Mixed PCB and Lead Waste must be removed from the site within 30 days of generation.

K. The Contractor may not store containerized hazardous lead waste (only) on the job site for in excess of 180 calendar days from the accumulation start date and may not store it past the date of project completion.

L. Contractor must utilize a certified transporter for hazardous waste in compliance with DOT Title 49 CFR, Part 172.

1. Contractor must submit the completed Uniform Hazardous Waste Manifest, EPA Form 8700-22 for each load of hazardous waste within 30 calendar days following the date the waste leaves the site. Copies of all landfill receipts will be retained by the Engineer as part of the project file. The receipts will be signed by the landfill operator upon delivery, and the quantity of hazardous lead waste debris leaving the job site and arriving at the landfill acknowledged.

TABLE 1 - LIST OF PAINTED ITEMS WITH DETECTABLE LEVELS OF LEAD

Material Description	Material Location	Substrate	Approximate Quantity*	Comments
Red Support Beam Paint(1)	Office Building	Metal	TBD	Paint removal scope (if any) to be determined based on final construction plans All waste generated must be disposed of as CTDEEP/EPA Regulated Mixed Hazardous Lead and Presumed PCB Bulk Product Waste ≥50 PPM.
Red(2) & Gray Support Column Paint	Machine Shop	Metal	TBD	Paint removal scope (if any) to be determined based on final construction plans All waste generated must be disposed of as EPA and CTDEEP Regulated Mixed Hazardous Lead and PCB Waste <50 PPM.
White, Red, & Gray Support Column Paint	Maintenance Garage	Metal	TBD	Paint removal scope (if any) to be determined based on final construction plans
Green Air Handler Paint(2)	Maintenance Garage	Metal	1 Unit = 120 SF	Full component demolition and removal.
White/Gray/Red Façade Paint	Maintenance Garage – North Exterior	Metal/Glass	3,200 SF	Full component demolition and removal.
Red Support Column Paint	Hazardous Waste Storage Building	Metal	2,000 SF	Buildings to be demolished by others. Paint removal scope (if any) to be determined based on final construction plans
Gray Wall Paint(2)	Hazardous Waste Storage Building – Control Room	Metal	85 SF	
Red Door Frame Paint	Hazardous Waste Storage	Metal	40 SF	

Material Description	Material Location	Substrate	Approximate Quantity*	Comments
Legend SF=Square Feet, EA = Each PPM = Parts Per Million TBD = To be Determined (1) Material and associated substrates are also presumed to contain PCB concentrations ≥ 50 ppm. (2) Material and associated substrates contain PCB concentrations <50 ppm and can be disposed at a facility that accepts recycled metals containing CTDEEP Regulated PCB Waste and Lead-Based Paint.				

* Approximate quantities included in this Table are provided to establish an order of magnitude for the amount of material that must be abated. Actual quantities may vary. It is the sole responsibility of the Contractor to visit the site, review the Contract Documents and determine the quantities of materials to be removed when developing their Bid.

END OF SECTION

SECTION 13283
HAZARDOUS MATERIALS MANAGEMENT

PART 1 GENERAL

1.1 RELATED INFORMATION

A. Related Sections

1. Section 01350 Health and Safety
2. Section 13281 Asbestos Abatement
3. Section 13282 Lead Paint Awareness
4. Section 13286 PCB-Containing Building Materials Abatement

1.2 GENERAL PROVISIONS

A. The removal and reclamation of hazardous materials as defined by the State of Connecticut Department of Energy and Environmental Protection (CTDEEP) is to be performed prior to renovation/demolition activities which will disturb the items.

1.3 PROJECT DESCRIPTION

A. The Contractor shall furnish and pay of all labor, materials, facilities, equipment, services, employee training and testing, permits and agreements, and waste transport, incineration, and reclamation necessary to perform the Work.

B. The Work shall be performed in accordance with these specifications and the requirements of the Unites States Environmental Protection Agency (EPA), Occupation Safety and Health Administration (OSHA), and State of Connecticut regulations.

1. Whenever there is a conflict or overlap of the above references, the most stringent provisions are applicable.

1.4 LOCATION OF WORK AREAS

A. The approximate locations of known universal/regulated building wastes, descriptions, estimated types and quantities of waste materials are described in Table 1 the end of this Section.

B. If additional wastes are encountered that were not previously identified, notify Engineer.

C. The quantities presented in Table 1 are provided for general guidance and may not correspond exactly to the amount of waste to be removed.

1.5 REFERENCES

A. The Contractor is advised to thoroughly review the documents referenced in this Section. Strict adherence to these requirements is required.

1. Code of Federal Regulations

a. Title 29 CFR Part 1910, “Occupational Safety and Health Standards” (General Industry Standards)

b. Title 29 CFR Part 1910.20, “Access to Employee Exposure and Medical Records”

c. Title 29 CFR Part 1910.134, “Respiratory Protection”

d. Title 29 CFR Part 1910.1200, “Hazard Communication”

e. Title 29 CFR Part 1926, "Safety and Health Regulations for Construction" (Construction Industry Standards)

f. Title 40 CFR Part 117, "Determination of Reportable Quantities for Hazardous Substances"

g. Title 40 CFR 172, "Hazardous Waste Transportation"

h. Title 40 CFR 261, "Identification and Listing of Hazardous Waste"

i. Title 40 CFR 262, "Standards Applicable to Generators of Hazardous Waste"

j. Title 40 CFR 263, "Standards Applicable to Transporters of Hazardous Waste"

k. Title 40 CFR 268, "Land Disposal Restrictions"

l. Title 40 CFR 273, “Standards for Universal Waste Management”

m. Title 40 CFR 300, "National Oil and Hazardous Substances Pollution Contingency Plan"

n. Title 40 CFR 302, "Designation, Reportable Quantities, and Notification"

o. Title 40 CFR 745, “Renovation, Repair and Repainting Program”

2. EPA Publications

a. SW-846, Test Methods for Evaluating Solid Waste - Physical/Chemical Methods

b. EPA Method 3050, "Acid Digestion of Sediments, Sludges, and Soils"

3. Connecticut Applicable Regulations

a. CGS Title 22a – Environmental Protection

b. CGS Section 22a-114 to 22a-134z Hazardous Waste Regulations

c. CGS Section 22a-207 to 22a-256ee Solid Waste Management

B. Local Town, City or County bylaws, rules and regulations

1.6 SUBMITTALS

A. Prior to removal of Wastes identified in this Section, submit a Waste Handling and Disposal Plan, including means and methods for all waste characterization,

management, handling, and disposal activities. Identify the proposed waste haulers and disposal facilities including copies of all applicable licenses, registrations and approvals.

B. Submit copies of all worker certifications associated with OSHA 40 Hour Hazardous Waste Site Health and Safety Training in accordance with Title 29 CFR 1910.120.

C. After completion of the Waste removal activities, submit a final report documenting removal, transportation and disposal of all wastes generated during the Work. This shall include copies of manifests, shipping slips, permits and licenses for this project.

1.7 DEFINITIONS:

A. BALLAST: a passive component used in an electric circuit to moderate changes in current. A light ballast regulates the current to the lamps and provides sufficient voltage to start the lamps. Ballasts manufactured prior to 1979 may contain PCBs. Ballasts manufactured between 1979 and 1991 may contain Di(2-ethylhexyl) phthalate (DEHP).

B. CAPACITOR: a device used to store an electric charge, consisting of one or more pairs of conductors separated by an insulator. May contain PCBs. Capacitors are commonly used in electronic equipment including HVAC Units, pumps, etc.

C. DEHP: Di(2-ethylhexyl) phthalate; manufactured chemical typically added to plastics to make them flexible. May be found in lighting ballasts manufactured between 1979 and 1991. Probable human carcinogen per U.S. EPA. Reasonably anticipated to be a human carcinogen per CDC.

D. HANDLER: The Contractor removing the universal/hazardous waste product.

E. LARGE QUANTITY GENERATOR: a handler can accumulate 5,000 kilograms or more of universal waste at any time.

F. MERCURY: A silvery-white poisonous metallic element, liquid at room temperature and used in thermometers, barometers, vapor lamps, and batteries and in the preparation of chemical pesticides. Mercury is known to have many different types of health effects particularly with the nervous, digestive and urinary systems.

G. POLYCHLORINATED BIPHENYLS (PCBs) – Any of several compounds that are produced by replacing hydrogen atoms in biphenyl with chlorine, have various industrial applications, and are toxic environmental pollutants which tend to accumulate in animal tissues. Probable human carcinogen per U.S. EPA. Reasonably anticipated to be a human carcinogen per CDC.

H. SMALL QUANTITY GENERATOR: a handler can accumulate not more than 5,000 kilograms or more of universal waste at any time.

I. UNIVERSAL WASTE: batteries, Mercury-containing thermostats, certain pesticides, lamps (including but not limited to fluorescent, neon and mercury vapor lamps), and used electronics.

1.8 GENERAL REQUIREMENTS

A. The Contractor is subject to approval by the Engineer and all regulatory agencies with jurisdiction over this work and may be rejected based on criteria established.

B. Workers handling wastes identified in this Section must be informed by their employer of the proper handling and emergency procedures appropriate to the type(s) of waste to be handled.

C. All Work must be completed in accordance with the site-specific Health and Safety Plan to be developed by the Contractor as specified in Section 01350.

D. Contractor shall have on hand, spill prevention, containment, and response materials and equipment necessary to address spillage that may occur during the Work. Provide appropriate polyethylene sheeting to protect concrete floor and other surfaces from any spillage.

E. Prepare all waste transportation and disposal documents as specified in Section 02120 Transportation and Disposal of Contaminated Materials. Provide fully executed waste shipping and disposal documents as proof of disposal when available and before completion of the project.

PART 2 PRODUCTS

2.1 TRANSPORTATION AND STORAGE CONTAINERS AND LABELING

A. All waste storage/shipping containers must be closed, structurally sound, compatible with the contents of the waste, and must be capable of preventing leakage, spillage or damage that could cause leakage.

B. All waste containers must be labeled in accordance with local, State, and Federal requirements.

C. All waste storage/shipping containers and labeling must comply with applicable United States Department of Transportation (DOT), USEPA, Connecticut DOT regulations and other regulations of all affected states.

PART 3 EXECUTION

3.1 EXISTING CONDITIONS

A. All work shall be done in a safe manner and in accordance with the Health and Safety Plan, State and local requirements.

B. Remove and/or stabilize all hazards necessary to safely enter the building, prior to commencing work inside the building. Where hazards cannot be stabilized, selectively demolish parts of the structure to gain safe access.

3.2 BALLAST REMOVAL

A. Accessible light fixtures and electrical motors shall be disassembled and inspected by the contractor. All resulting lamps and electrical motor capacitors shall be immediately packaged for reclamation.

B. If ballasts or capacitors are found to be leaking, contaminated light fixtures, lenses and electrical motors shall be disposed of as PCB-contaminated materials.

C. All protective equipment (gloves, suits) and materials contaminated during any cleanup shall be disposed of as PCB- contaminated waste along with the ballasts and fixtures.

D. All Ballasts and fixture components shall be placed in DOT-approved barrels for subsequent transport immediately upon removal. Barrels will be labeled with the following yellow PCB caution label:

CAUTION
CONTAINS
PCBs
(Polychlorinated Biphenyls)
A toxic environmental contaminant
Requiring special handling and
Disposal in accordance with U.S.
Environmental Protection Agency
Regulations 40 CFR 761 - For
Disposal Information contact the
Nearest U.S. EPA Office.

In case of accident or spill, call toll
Free the U.S. Coast Guard National
Response Center:
800-424-8802

E. Separate ballasts, capacitors and fixture components into separate drums. Leaking ballasts and capacitors shall be separate from all other items.

F. Use new 17C 55-gallon open head steel drums that have been approved for transporting hazardous materials. Used or reconditioned drums may be used only if they have been properly cleaned, tested, and labeled.

G. Drums shall be prepared by placing one to three inches of absorbent material in the bottom of the drum.

H. Drums shall be packed so as to not exceed a total weight of 900 pounds. If proper handling equipment is not available, half fill the drums so that manual handling is possible.

I. Ballasts and contaminated light fixture components shall be transported to an approved Recycling/Incineration facility in accordance with any waste hauler special requirements. CTDEEP regulations prohibit disposal at landfills.

J. All drums and bulk items shall contain a material profile which includes the name, address, and telephone number of the waste generator; the date on which the materials were removed; a description of the materials, (i.e., discarded light ballasts); and the new DOT Shipping Description, (RQ, Polychlorinated Biphenyl, 9, UN2316, PGII).

K. Provide a Bill of Lading for reclamation; Connecticut Department of Environmental Protection (CTDEEP) Hazardous Waste Manifest; and/or federal Uniform Hazardous Waste Manifest, as appropriate with each shipment.

L. Drums and bulk items shall be transported by a Connecticut licensed hazardous waste hauler, unless leaking ballasts are involved, in which case a registered PCB hauler shall be utilized.

M. Drums and bulk items shall be transported from the work site immediately upon completion of removal and packing. No materials are to be stored at the site.

3.2 MERCURY VAPOR LAMP AND FIXTURE REMOVAL

A. Accessible light fixtures shall be disassembled and inspected by the contractor. All resulting lamps shall be immediately packaged for reclamation.

B. Carefully remove fluorescent lighting and place directly into boxes or barrels specifically designed for the transport of fluorescent lighting. Package lighting and ballast in accordance with the recycling facilities requirements. Broken glass and residual dust shall be HEPA vacuum and disposed of as Mercury contaminated materials.

3.3 BATTERIES AND FIRE EXTINGUISHERS

A. In accordance with State and Federal regulations, many batteries and fire extinguishers must be managed as hazardous wastes when disposed. These include, but are not limited to, all types of fire extinguishers, lead acid batteries, nickel cadmium batteries, lithium batteries, and older alkaline batteries containing mercury. The following protocol shall be followed for the disposal of all such fire extinguishers and batteries:

1. Collection, characterization, and proper disposal of all fire extinguishers and batteries found throughout the facility.

2. Provide waste shipment documentation or recycling records and incorporate in the final report.

3.4 HAZARDOUS MATERIALS/WASTE

A. Perform all waste characterization, management, handling, and disposal activities in accordance with all applicable regulations and the Waste Handling and Disposal Plan that will be prepared as specified in Part 1.6 of this Section

B. Workers who handle hazardous materials shall be licensed or certified and trained in safe and proper hazardous materials handling procedures. At a minimum, this shall include OSHA 40 Hour Hazardous Waste Site Health and Safety Training in accordance with Title 29 CFR 1910.120.

C. Remove as soon as possible any hazardous materials containers that are in poor condition.

D. Certain existing drums or containers of hazardous and special wastes may not be in a shippable condition. As required, transfer materials within non-shippable containers to new containers or overpack non-shippable containers with appropriately sized overpack drums.

E. Handling Hazardous Materials and Waste

1. Place waste in DOT approved containers and label the containers for transport to a licensed disposal site.

2. Use of an authorized hazardous waste transporter to haul waste to a hazardous waste facility is required.

3. Follow all record keeping, chain-of-custody and reporting requirements including a copy of the hazardous waste manifest or other appropriate waste shipping documents.

4. Accurately measure and weigh the volume of each container or load of waste removed from the site. Submit records of waste volumes to Owner and Engineer.

5. Give special attention to the time of storage, amount of material stored at any one time, use of proper containers and personnel training.

6. Provide appropriate notifications to Engineer and Owner if waste is released to the environment.

7. Any evidence of improper storage shall be cause for immediate shutdown of the project until corrective action is taken.

8. Provide legal transportation of the waste to the disposal facility, and complete or obtain all required licenses, manifests, landfill slips, or other forms. Submit copies of all forms or licenses, and the signed original of the Waste Manifest for each waste load.

3.5 CLOSEOUT DOCUMENTS

A. Submit to the Owner/ Engineer, final completed copies of the waste manifests or bills of lading signed by all transporters and the designated disposal site owner/operator.

B. Submit to the Engineer copies of all Contractor's logs and all worker certifications.

C. Final payment will be withheld until receipt of all the above documentations to Owner’s/ Engineer’s satisfaction.

Table 1 – LIST OF HAZARDOUS BUILDING WASTES

Material	Waste Type	Container Type & Size	Approximate Quantity*	Location	Comments
Fluorescent Light Bulbs	Mercury Vapor	2'- 8' and U-Shape Glass Tubes	750 EA	Office Building	
HID (High-Intensity Discharge) Bulbs	Mercury Vapor	Glass Bulbs	7 EA	Office Building	
Fluorescent Light Ballasts	PCBs or DEHP	Metal	250 EA	Office Building	Presumed PCBs or DEHP
Fire Extinguishers	CO_2 / monoammonium phosphate / ammonium sulfate	Metal	5 EA	Office Building	
Refrigerants	Freon, etc.	Metal	2 EA	Office Building	Wall A/C Units & Chiller Unit
Emergency Lights	Heavy Metals (Lead, Etc.)	Plastic Fixtures	8 EA	Office Building	
Exit Signs	Heavy Metals (Lead, Etc.)	Plastic Fixtures	12 EA	Office Building	
Mercury Switch/Thermostat	Liquid Mercury	Glass Vial	20 EA	Office Building	
Electronic Waste	Lead & Cadmium	Plastic/Metal	12 EA	Office Building	Computers, Keyboards, Circuit Boards, etc.
Capacitors	PCBs	Metal Motors	4 EA	Office Building	
Battery	Lead & Acid	Plastic	1 EA	Office Building	

Table 1 – LIST OF HAZARDOUS BUILDING WASTES

Material	Waste Type	Container Type & Size	Approximate Quantity*	Location	Comments
Miscellaneous Paints, Cleaners, Chemicals, etc.	Cleaners, Paints, Oils/Lubricants, Paint Strippers	Plastic Containers, Metal Cans, Spray Cans	40 EA	Office Building	
Fluorescent Light Bulbs	Mercury Vapor	4'- 8' Glass Tubes	56 EA	Machine Shop	
Fluorescent Light Ballasts	PCBs or DEHP	Metal	28 EA	Machine Shop	Presumed PCBs or DEHP
Fire Extinguishers	CO_2 / monoammonium phosphate / ammonium sulfate	Metal	5 EA	Machine Shop	
Mercury Switch/Thermostat	Liquid Mercury	Glass Vial	2 EA	Machine Shop	
Emergency Lights	Heavy Metals (Lead, Etc.)	Plastic Fixtures	2 EA	Machine Shop	
Exit Signs	Heavy Metals (Lead, Etc.)	Plastic Fixtures	2 EA	Machine Shop	
Capacitors	PCBs	Metal Motors	6 EA	Machine Shop	
Miscellaneous Paints, Cleaners, Chemicals, etc.	Cleaning Agents	Plastic Containers	4 EA	Machine Shop	
Fluorescent Light Bulbs	Mercury Vapor	4'- 8' Glass Tubes	30 EA	Machine Shop Office	
Fluorescent Light Ballasts	PCBs or DEHP	Metal	17 EA	Machine Shop Office	Presumed PCBs or DEHP
Fire Extinguishers	CO_2 / monoammonium phosphate / ammonium sulfate	Metal	1 EA	Machine Shop Office	
Mercury Switch/Thermostat	Liquid Mercury	Glass Vial	3 EA	Machine Shop Office	
Emergency Lights	Heavy Metals (Lead, Etc.)	Plastic Fixtures	2 EA	Machine Shop Office	
Exit Signs	Heavy Metals (Lead, Etc.)	Plastic Fixtures	2 EA	Machine Shop Office	
Capacitors	PCBs	Metal Motors	10 EA	Machine Shop Office	

Table 1 – LIST OF HAZARDOUS BUILDING WASTES

Material	Waste Type	Container Type & Size	Approximate Quantity*	Location	Comments
Miscellaneous Paints, Cleaners, Chemicals, etc.	Cleaning Agents	Plastic Containers	3 EA	Machine Shop Office	
Fluorescent Light Bulbs	Mercury Vapor	8 Glass Tubes	150 EA	Maintenance Garage	
HID (High-Intensity Discharge) Bulbs	Mercury Vapor	Glass Bulbs	6 EA	Maintenance Garage	
Fluorescent Light Ballasts	PCBs or DEHP	Metal	75 EA	Maintenance Garage	Presumed PCBs or DEHP
Emergency Lights	Heavy Metals (Lead, Etc.)	Plastic Fixtures	3 EA	Maintenance Garage	
Exit Signs	Heavy Metals (Lead, Etc.)	Plastic Fixtures	2 EA	Maintenance Garage	
Mercury Switch/Thermostat	Liquid Mercury	Glass Vial	2 EA	Maintenance Garage	
Fire Extinguishers	CO_2 / monoammonium phosphate / ammonium sulfate	Metal	8 EA	Maintenance Garage	
Capacitors	PCBs	Metal Motors	56 EA	Maintenance Garage	
Miscellaneous Paints, Cleaners, Chemicals, etc.	Unknown Liquid	Plastic Containers	3 EA	Maintenance Garage	
Fluorescent Light Bulbs	Mercury Vapor	8 Glass Tubes	34 EA	Quonset Hut / Quonset Hut Addition	
HID (High-Intensity Discharge) Bulbs	Mercury Vapor	Glass Bulbs	19 EA	Quonset Hut / Quonset Hut Addition	
Fluorescent Light Ballasts	PCBs or DEHP	Metal	16 EA	Quonset Hut / Quonset Hut Addition	Presumed PCBs or DEHP
Emergency Lights	Heavy Metals (Lead, Etc.)	Plastic Fixtures	2 EA	Quonset Hut / Quonset Hut Addition	
Exit Signs	Heavy Metals (Lead, Etc.)	Plastic Fixtures	3 EA	Quonset Hut / Quonset Hut Addition	
Mercury Switch/Thermostat	Liquid Mercury	Glass Vial	1 EA	Quonset Hut / Quonset Hut Addition	

Table 1 – LIST OF HAZARDOUS BUILDING WASTES

Material	Waste Type	Container Type & Size	Approximate Quantity*	Location	Comments
Fire Extinguishers	CO_2 / monoammonium phosphate / ammonium sulfate	Metal	2 EA	Quonset Hut / Quonset Hut Addition	
Capacitors	PCBs	Metal Motors	16 EA	Quonset Hut / Quonset Hut Addition	
Miscellaneous Paints, Cleaners, Chemicals, etc.	Cleaning Agents	Plastic Containers	3 EA	Quonset Hut / Quonset Hut Addition	
HID (High-Intensity Discharge) Bulbs	Mercury Vapor	Glass Bulbs	12 EA	Exterior	
Fire Extinguishers	CO_2 / monoammonium phosphate / ammonium sulfate	Metal	1 EA	Exterior	
Exit Signs	Heavy Metals (Lead, Etc.)	Plastic Fixtures	2 EA	Exterior	
Emergency Lights	Heavy Metals (Lead, Etc.)	Plastic Fixtures	2 EA	Exterior	
Capacitors	PCBs	Metal Motors	1 EA	Exterior	
Transformer	PCBs	Metal Unit	1 EA	Exterior	
Miscellaneous Paints, Cleaners, Chemicals, etc.	Cleaning Agents	Plastic Containers	4 EA	Exterior	

Legend
EA = Each
CO_2 = Carbon Dioxide
PCB = Polychlorinated biphenyl
DEHP = Diethylhexl Phthalate

* Approximate quantities included in this Table are provided to establish an order of magnitude for the amount of material that must be abated. Actual quantities may vary. It is the sole responsibility of the Contractor to visit the site, review the Contract Documents and determine the quantities of materials to be removed when developing their Bid.

END OF SECTION

SECTION 13286

PCB-CONTAINING BUILDING MATERIALS ABATEMENT

PART 1 GENERAL

1.1 SUMMARY

A. This Section establishes requirements for the removal, segregation, management, and disposal of Polychlorinated Biphenyls (PCB)-containing building materials.

B. The removal and disposal of building materials either determined or assumed to contain PCBs greater than or equal to (≥) 50 ppm is regulated by the Toxic Substance Control Act (TSCA) pursuant to Federal regulation Title 40 CFR, Part 761.

1. Demolition debris with known or assumed PCB concentrations ≥ 50 ppm is regulated as "PCB Bulk Product Waste".

2. Paints, glazing, caulks, and other potential source materials not previously sampled, but are scheduled to be impacted during the improvements, are assumed to contain PCB concentrations ≥ 50 ppm (Bulk Product Waste) and are to be managed, removed, cleaned, and disposed as such. Refer to Table 1 for material types, locations, and estimated quantities.

C. The removal and disposal of PCB-containing building materials with concentrations greater than (>) 1 ppm but less than (<) 50 ppm is regulated under the Connecticut General Statutes (CGS) 22a-463 through 22a-469.

D. The intent of this Section is to identify applicable regulations the Contractor must comply with to perform demolition and renovation activities for this project related to PCB-containing building materials including, but not limited to, the following:

1. Health and safety procedures

2. Worker training

3. Demolition and removal procedures

4. Disposal requirements

E. The Contractor is solely responsible for health and safety procedures related to their work.

F. This Section specifies requirements for the removal, management, and disposal of the following PCB-containing wastes:

1. PCB Bulk Product Waste identified or assumed in paints and substrates containing PCB concentrations ≥50 ppm.

2. Paints and associated substrates containing CTDEEP Regulated PCB Waste (>1 ppm, but <50 ppm PCBs).

G. The Contractor must also reference Section 13282 Lead Paint Management.

1.2 RELATED DOCUMENTATION

A. Related Sections

1. Section 01350, Health and Safety Plan

2. Section 02225, Selective Demolition

3. Section 13281, Asbestos Abatement

4. Section 13282, Lead Paint Management

B. Related Information

1. Hazardous Building Materials Assessment Report, dated October 2022 by Tighe & Bond, Inc.

2. Hazardous Building Materials Abatement Plans, Figures 1.1 through 1.6.

1.3 DESCRIPTION OF WORK

A. PCB-Containing Building Materials Abatement work includes, but is not limited to, the materials identified in Table 1 located at the end of this Section.

1. The quantities in Table 1 are provided to establish the order of magnitude of the abatement project. Actual quantities may vary.

2. It is the sole responsibility of the Contractor to visit the site, review the Contract Documents and determine the quantities of materials to be removed when developing their Bid.

B. If additional potentially, PCB containing building materials not identified in this Section, are encountered by the Contractor as part of demolition or renovation activities, notify the Engineer immediately. Contractor is responsible for confirming actual quantities to form the basis of their bid.

C. As further detailed in this Section, no sampling and/or analysis by the Contractor or affiliates of the Contractor (subcontractors, subconsultants, etc.) for total PCBs (Soxhlet Extraction) may be performed at any point during the performance of the work, except as specifically authorized in writing by the Owner and the Engineer.

1. The Contractor must collect representative samples of the waste stream for PCB analysis via the Toxicity Characteristic Leaching Procedure (TCLP) for waste disposal purposes only.

2. The Contractor is responsible for selecting disposal facilities that can accept PCB wastes with this restriction.

3. If the Contractor or affiliates of the Contractor (subcontractors, subconsultants, etc.) take unauthorized samples and analyze them for total PCBs, then the contractor will be responsible for the cost of any resulting removal required under existing state and federal regulations triggered by their sampling and analysis.

4. The Owner and the Engineer must specifically review and approve in writing a proposed testing plan prior to samples being submitted for laboratory analysis.

D. In general, the following activities are minimum requirements of this Section and affect the renovation or demolition performed on building components assumed to contain PCBs:

1. No torch cutting of PCB-containing building materials may be performed.

2. No demolition activities may occur that can reasonably be expected to increase the worker's exposure above the Permissible Exposure Limits (PEL) for PCBs unless certain worker protection is implemented.

3. Workers must be informed of the PCB-containing building materials to be removed or encapsulated.

4. At a minimum, worker protection must comply with applicable Occupational Safety and Health Administration (OSHA) standards. Worker Right to Know and Health and Safety Standards of Title 29 CFR, Part 1926 must also apply to the work of this Section.

5. Unprotected, untrained workers or trades must not perform any related work within or adjacent to work areas involving PCB-containing building materials.

1.4 SUBMITTALS

A. Prior to the start of the work, prepare and submit the following items. Do not commence work activities until submittals are approved.

1. Work schedule two weeks prior to commencement of work.

2. Written Contractor Work Plan that summarizes the Contactor's means and methods related to the renovation/demolition, containment, management, and disposal of assumed PCB-containing building materials and wastes.

a. The PCB Work Plan must include management and disposal of CTDEEP and/or EPA regulated PCB Waste.

b. The PCB Work Plan must include information on how and where wastes will be stored, marked, and disposed of, and how field equipment will be decontaminated.

c. A description of the waste load-out process and route to disposal containers must also be included.

d. The PCB Work Plan must also address personal protective equipment, worker health and safety training, and decontamination procedures.

e. Copies of PCB awareness training for all workers and supervisors involved with assumed PCB-containing building materials removal. Awareness training must cover the following at a minimum:

1) Dangers inherent in handling PCBs and proper work procedures, worker protective measures, dust suppression methods, waste containerization, and disposal requirements.

f. The Contractor Work Plan must be reviewed and accepted by the Engineer.

1) Review of Contractor's Work Plan does not constitute approval of any specified means, methods and health and safety measures to be implemented.

2) The review will be for general compliance with this specification and associated applicable TSCA regulations.

3. Certification signed by the Contractor stating that the Contractor will comply with all TSCA and State of Connecticut requirements for PCB removal and disposal.

4. Pertinent information relating to the transportation and disposal of PCB-containing materials.

a. This includes names of transporters and disposal facilities to be used including proof of permit, license, or authorization to transport and dispose of PCB-containing materials in all affected states.

b. The Contractor must include information related to disposal facilities ability to accept waste containing PCBs and lead painted components.

c. The Contractor must provide the Engineer draft copies of all profiles and manifests for review prior to Owner/disposal facility signature.

B. Contract Closeout Submittals (throughout project and prior to authorization of final payment):

1. Records of the amounts of waste generated, by waste type.

2. Evidence of lawful disposal of all PCB wastes generated.

1.5 REGULATORY REQUIREMENTS

A. Title 40 CFR, Part 761 as it relates to the generation, staging, labeling, removal and off-site management of PCB Bulk Product Waste (≥50 ppm).

B. CGS 22a-463 through 22a-469 and Title 40 CFR, Part 761 as it relates to the generation, staging, labeling, removal and off-site management of PCB Waste.

C. Contractor is solely responsible for obtaining permits or approvals which may be required to perform the work of this Section, including all costs, fees, and taxes required or levied.

D. Comply with all applicable federal, state, and local environmental, safety and health requirements regarding the demolition of structures and other site features and recycling or disposal of demolition debris, as applicable.

E. All workers involved with assumed PCB-containing building materials removal activities must have attended a PCB awareness class.

1.6 DEFINITIONS

A. ABATEMENT - Procedures to control dust/debris release from PCB-containing building materials; includes removal, encapsulation, and enclosure.

B. AUTHORIZED VISITOR - Any person authorized by the Owner to enter the building.

C. COMPETENT PERSON - A representative of the Contractor who is capable of identifying a PCB hazard and who has the authority to take prompt corrective measures to eliminate the hazard during PCB removal.

D. DECONTAMINATION ENCLOSURE SYSTEM - A series of connected areas, with curtained doorways between any two adjacent areas, for the decontamination of workers and equipment. A decontamination enclosure system always contains at least one airlock and is adjacent and connected to the regulated area, where possible.

E. ENGINEER – Third Party Engineering/Environmental Consultant.

F. EPA – U.S. Environmental Protection Agency.

G. EXCLUDED PCB PRODUCTS - PCB materials that appear in concentrations of less than 50 ppm at the time of testing.

H. FACILITY - Any private or public building or structure including but not limited to those used for institutional, residential (including single family homes), commercial or industrial purposes and vessels while ashore or in dry-dock.

I. HAZARDOUS WASTE MANIFEST - a form required by EPA and the Department of Transportation for all generators who transport, or offer for transport, hazardous waste for off-site treatment, recycling, storage, or disposal.

J. HEPA FILTER - A high efficiency particulate air (HEPA) filter in compliance with ANSI Z9.2.

K. HEPA VACUUM EQUIPMENT - Vacuum equipment with a HEPA filter system for filtering the effluent air from the unit.

L. NEGATIVE AIR FILTRATION EQUIPMENT - A portable local exhaust system equipped with HEPA filtration used to create negative pressure in a regulated area (negative with respect to adjacent unregulated areas) and capable of maintaining a constant, low velocity air flow into regulated areas from adjacent unregulated areas.

M. OWNER'S REPRESENTATIVE -The PCB Consultant/Engineer for the project.

N. PCB ABATEMENT WORKER - Any employee of a Contractor who engages in PCB abatement.

O. PCB BULK PRODUCT WASTE - waste derived from any manufactured product that contain PCBs in a non-liquid state and the concentration of PCBs is 50 ppm or greater at the time the product is designated for disposal.

P. PCB CONTROL AREA - An area where PCB abatement operations are performed which is isolated by physical boundaries to prevent the spread of PCB dust or debris.

Q. PCB WASTE - Those PCBs and PCB Items that are subject to the disposal requirements of Subpart D of Title 40 CFR, Part 761, which includes §761.62, Disposal of PCB Bulk Product Waste.

R. PLASTICIZE - To cover floors and walls with plastic sheeting as specified herein.

S. POLYCHLORINATED BIPHENYLS (PCBS) - Any of several compounds that are produced by replacing hydrogen atoms in biphenyl with chlorine, have various industrial applications, and are toxic environmental pollutants which tend to accumulate in animal tissues. Probable human carcinogen per U.S. EPA.

T. TSCA - The Toxic Substances Control Act of 1976 (Title 40 CFR, Part 761) provides EPA with authority to require reporting, record-keeping, and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics, and pesticides. TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint.

U. WET CLEANING - The process of reducing PCB contamination from building surfaces and objects by using cloths, mops, or other cleaning tools, which have been dampened by amended water, and by then disposing of these cleaning items as PCB-contaminated waste.

V. WORK AREA - Designated rooms, spaces, or areas of the project in which PCB abatement actions are occurring and which may become contaminated as a result of such abatement actions. The work area must be totally self-contained by sealing, plasticizing, and equipping the area with a decontamination enclosure system.

W. WORK STOPPAGE CLEANUP PROCEDURE - A process following the issuance of a written stop work order, whereby the Contractor thoroughly cleans and decontaminates the work area, the decontamination enclosure system, and any other areas of the building affected by the removal project, to the satisfaction of the Engineer.

X. WORK ZONE - The area of the decontamination enclosure system where PCB-contaminated items are being removed.

PART 2 PRODUCTS

2.1 ABATEMENT PRODUCTS

A. All materials must be delivered in the original packages, containers, or bundles bearing the name of the manufacturer and the brand name.

B. Disposal Drums: Metal or fiberboard with locking ring tops, with warning labels as required by OSHA, and/or EPA.

C. Respirators:

1. Type: Approved by the Mine Safety and Health Administration (MSHA), Department of Labor, or the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services.

D. Vacuum Cleaners:

1. Type: Vacuums equipped with HEPA filters.

E. Polyethylene Sheeting:

1. Type: Minimum 6 mil., opaque, fire retardant polyethylene sheets.

2. Floor Protective Layer (when applicable): Minimum 10 mil., reinforced polyethylene sheets.

F. Cleaning Products:

1. Contractor must at their discretion utilize specialty cleaning products such as Capsur™, TechXtract™ or other cleaners for use in decontaminating porous and non-porous surfaces to remain.

2. All such products must be utilized in accordance with manufacturer's specifications as intended. Contractor must ensure appropriate use and disposal associated with use in accordance with the SDS sheets for each product utilized.

3. It must be incumbent upon the Contractor to determine the need for use of specialty products to meet required cleaning verification levels established herein and in accordance with the Work Plan.

G. HEPA-Filtered Exhausts

1. Air inside negative pressure enclosures must be exhausted through a HEPA filter.

2. Commercially manufactured HEPA-filtered exhaust units, with specification plates intact, must be provided for each work area to attain, at a minimum, four air volume changes per hour and an inward flow of clean air into each work area at the Decontamination Facility of at least 100 feet per minute.

3. The HEPA filter must be preceded by replaceable pre-filters and the unit must be designed so that it cannot be operated unless all filters are in place.

4. The purpose of the containment system is to capture fugitive particulate while removing PCB-contaminated items using mechanical means and/or methods which generate potential PCB-contaminated dust.

H. Warning Signs

1. Warning signs must be in English and the language of any workers onsite who do not speak English, and be of sufficient size to be clearly legible and display the following or similar language in accordance with Title 29 CFR, Part 1910.1200:

WARNING
HAZARDOUS WASTE WORK AREA

PCBs-POISON
NO SMOKING, EATING OR DRINKING
AUTHORIZED PERSONNEL ONLY
PROTECTIVE CLOTHING IS REQUIRED IN THIS AREA

2.2 GENERAL EQUIPMENT

A. A sufficient supply of disposable mops, rags, and sponges for work area cleaning and decontamination must be available.

B. A sufficient supply of ladders and hand tools (e.g., scrapers, wire cutters, brushes, utility knives, wire saws, etc.) must be provided as needed.

C. Media-blasting and/or mechanical grinding may be performed only within a negative pressure containment. Mechanical grinders must have factory-equipped shrouded HEPA vacuum attachments.

2.3 PERSONNEL PROTECTION

A. Safety equipment (e.g., hard hats meeting the requirements of ANSI Standard Z89.1, eye protection meeting the requirements of ANSI Standard Z87.1, safety shoes meeting the requirements of ANSI Standard Z41.1, disposable PVC gloves or other work gloves), must be provided to all workers and authorized visitors.

B. Non-skid footwear must be provided to all abatement workers. Disposable clothing must be adequately sealed to the footwear to prevent body contamination.

C. The contactors specific containment approaches must also include the following products:

1. Plastic Sheeting ("Poly") - must be polyethylene or equivalent with two layers with a thickness of at least 6-mil for all applications.

2. Tape and Glue – Must be capable of sealing plastic joints and attaching plastic to finished surfaces. The bonding strength and resulting seal integrity must not be affected by mist or water, wetting agent, or any other materials to be used in the work area.

PART 3 EXECUTION

3.1 PROJECT MEETINGS

A. Pre-Construction Meeting

1. At least one week prior to the start of work a Pre-Construction Meeting will be scheduled and must be attended by the Contractor and any Sub-Contractors.

2. The assigned Contractor Site Supervisor is also required to attend this meeting.

3. The Contractor must present a detailed project schedule, work plan, and project submittals prior to the Pre-Construction Meeting.

4. Variations, amendments, and corrections to the presented schedule will be discussed and the Owner and Engineer will inform the Contractor of any scheduling adjustments for this project.

5. Following the Pre-Construction Meeting, the Contractor must submit a revised schedule (if needed) no later than one week after the meeting.

3.2 ABATEMENT, DEMOLITION/RENOVATION, AND REMOVAL METHODS REQUIREMENTS

A. Abatement and Demolition/Renovation activities must be conducted in a manner that prevents the release of potential PCB-contaminated dusts to areas outside the immediate work zone.

1. Mechanical means and/or methods which generate potential PCB-contaminated dust must be conducted within negative pressure enclosures.

2. The sole use of guards and/or HEPA-vacuums on mechanical equipment is not sufficient.

B. Non-PCB contaminated demolition debris must be segregated from PCB-contaminated demolition debris and disposed in accordance with this Section.

1. Additional disposal costs resulting from cross contamination of these materials caused by Contractor mismanagement will be the responsibility of the Contractor.

C. Feasible engineering controls (i.e., misters, ventilation with HEPA filtration) must be implemented by the Contractor to minimize the possibility of contamination of areas adjacent to the work area.

D. Workers must be informed of the building components to be removed that have been assumed as containing PCBs and must implement appropriate personal protection (respiratory, dermal, etc.)

E. A review by the State Historic Preservation Office (SHPO) stated "existing windows of the White Oak Building appeared to be in good condition and contributed to the historic integrity" and is requiring the Office Building windows to "retained." Contractor must take all necessary precautions not to damage window openings at the Office Building when removing the actual windows as is required in the abatement specifications.

F. All proposed demolition/renovation and removal methods must be included in the Contractor Work Plan.

3.3 WORKER PROTECTION

A. The Contractor is solely responsible for the health and safety of workers employed by the Contractor, any subcontractor and anyone directly or indirectly employed by any of them. The Engineer is not responsible for health and safety procedures related to the Contractor's work.

B. The Contractor must be responsible for ensuring OSHA compliance for all personnel working with assumed PCB items, including providing appropriate personal protective equipment and training to use such protective equipment.

C. During demolition or renovation activities, Contractor must ensure that workers are not exposed to any listed contaminant in excess of the PEL. If exposure cannot be reduced to or below the PEL using engineering controls or revised work practices, the Contractor must provide the appropriate level of personal protective equipment including, but not limited to, respiratory and dermal protection.

D. Contractor personnel involved in the removal or disturbance of assumed PCB building materials must be advised of all hazards associated with the work.

E. Contractor is advised that certain PCB-containing building materials may also contain lead.

F. Personal Protective Equipment must be worn in areas where any disturbance of assumed PCB source materials (Paint, Caulk) or contaminated substrates is performed. This includes, but not limited to, removal and cleaning.

G. Marking of PCB work areas and PCB storage areas must be in accordance with Title 40 CFR, Part 761.40 and CGS 22a-463 through 22a-469.

3.4 WORKER HYGIENE PRACTICES

A. Work Area Entry: Workers must don personal protective equipment prior to entering work area, including respiratory protection, disposable coveralls, gloves, headgear, and footwear.

B. Work Area Departure: While leaving respirators on, workers must remove all gross contamination, debris, and dust from disposable coveralls and proceed to change room and remove coveralls and footwear and place in hazardous waste disposal container.

C. Hand washing Facilities: All workers must wash their hands and faces upon leaving the work area.

D. Equipment: All equipment used by workers inside the work area must be wet wiped or bagged for later decontamination before removal from the work area.

E. Prohibited Activities: Under no circumstances must workers eat, drink, smoke, chew gum, or tobacco, or remove their respirators in the work area.

F. Shock Hazards: The Contractor is responsible for using safe procedures to avoid electrical hazards. All temporary electrical wiring will be protected by ground fault circuit interrupters (GFCI).

3.5 GENERAL WORK AREA PREPARATION

A. A Competent Person must be on the job at all times to ensure the establishment of proper separation of the work area from occupied areas and that proper work practices are followed through project completion.

B. Where necessary, shut down electrical power. Provide GFCI devices, temporary power, and temporary lighting installed in compliance with the applicable electrical codes. All installations are to be made by a Connecticut licensed electrician.

C. Shut down and/or isolate heating, cooling, and ventilation air systems or zones to prevent contamination to other areas of the structure. During the work, vents around the work area must be sealed with duct tape and polyethylene sheeting

3.6 WORK AREA PREPARATION FOR INTERIOR/EXTERIOR PAINT REMOVAL AND/OR COMPONENT REMOVAL

A. Poly drop cloths must be placed in the work area and under each component prior to dismantling the component.

1. Protection must include one layer of 6-mil reinforced polyethylene sheeting securely fastened to floor extending out a minimum of 10 feet in each direction.

2. Build a small curb at perimeter of sheeting to contain any paint chips and/or dust.

B. Install caution tape at a minimum of 15 feet beyond the paint removal area and or components scheduled for removal to demarcate the regulated work area. Post warning signs at each work area.

C. In addition, signs must be posted at all approaches to areas so that employees may read the sign and take the necessary protective steps before entering the area.

D. Doors and windows within 10 feet of the work area must be closed and sealed with critical barriers taped and glued.

E. Place all required tools and equipment in the work area so that workers will not have to leave the area. This will avoid stepping off the protective sheeting.

F. Use protective shoe covers, tack pads, or have available cleaning materials to wipe off shoes prior to stepping off the protective sheeting.

3.7 WORK AREA PREPARATION FOR EXTERIOR ABATEMENT

A. Install ground protection on the exterior/interior of the building in area of work.

1. Protection must include a single layer of 6-mil reinforced polyethylene sheeting securely fastened to foundation extending out a minimum of 10 feet in each direction.

2. Build a small curb at perimeter of sheeting to contain any debris and/or dust.

B. Install caution tape at boundary of the ground protection to demarcate the regulated area. Post warning signs at each work area.

1. In addition, signs must be posted at all approaches to areas so that employees may read the sign and take the necessary protective steps before entering the area.

C. Place all required tools and equipment in the work area so that workers will not have to leave the area. This will avoid stepping off the protective sheeting.

D. Use protective shoe covers, tack pads, or have available cleaning materials to wipe off shoes prior to stepping off the protective sheeting.

3.8 WORK AREA PREPARATION FOR NEGATIVE PRESSURE ENCLOSURES (IF REQUIRED)

A. If required, negative pressure enclosures must be utilized by the Contractor during removal means and/or methods which generate potential PCB-contaminated dust.

1. Negative pressure enclosures must be utilized during all removal activities involving mechanical equipment whether equipment is equipped with HEPA-vacuums or not.

B. Provide GFCI devices, temporary power, and temporary lighting installed in compliance with the applicable electrical codes. All temporary installations are to be made by a licensed electrician, installed outside work areas, and permitted as required.

C. Shut down electrical power, including receptacles and light fixtures. Lock and tag out circuits associated with the electrical components in the work area(s). Under no circumstances during the abatement procedures will existing lighting fixtures be permitted to be energized.

D. Shut down and/or isolate heating, cooling, and ventilation air systems or zones to prevent contamination to other areas of the structure. Lock and tag out circuits associated with heating and cooling units. During the work, vents within the work area must be sealed with duct tape and polyethylene sheeting.

E. Seal off all openings, including but not limited to windows, corridors, doorways, skylights, ducts, grills, diffuser, and any other penetration of the work areas, with polyethylene sheeting minimum of 6-mil thick sealed with duct tape. This includes doorways and corridors which will not be used for passage during work areas and occupied areas. Install five-micron water filtration socks in all floor drains prior to sealing.

F. Install two layers of 6-mil polyethylene wall sheeting over all wall surfaces not being abated and critical barrier. All overlaps must be sealed with tape or spray adhesive.

G. Cover all floors not being abated in the work area with two layers of 6-mil polyethylene sheeting.

1. Extend the polyethylene flooring a minimum of 12 inches up the walls. Ensure that the wall sheeting overlaps the floor sheeting from the top.

H. Where containments extend above suspended or fixed ceilings, remove ceiling as necessary to perform installation of isolation barriers and wall sheeting above ceiling. Wall sheeting must extend to the top of each wall in ceiling plenum areas.

I. Maintain emergency and fire exits from the work area or establish alternative exits satisfactory to fire officials.

J. Create pressure differential between work areas and occupied areas by the use of acceptable negative air pressure equipment.

1. Negative air pressure must be obtained throughout the containment and the total volume of air within the work area must be changed every 15 minutes.

2. Install one or more portable HEPA-filtered exhausts to maintain negative air pressure to each individual work where containment procedures are utilized.

3. The exhaust(s) must be capable of providing at least an inward velocity through any unsealed openings of at least 100 fpm, and four full air changes per hour throughout the work area.

4. All exhaust air must pass through a HEPA-filter before being discharged outside the building.

5. Exhaust system must be operated constantly during active disturbance of PCB-containing materials.

K. Post all approaches to each work area with warning signs. Warning signs must be of size and type that are easily readable and are visible from all approaches to the work areas and adhere to regulatory requirements.

L. Establish a work area access control log at the entrance to each work area. Authorized personnel entering the work area must sign in upon entering the area and sign out upon exiting the area.

M. Establish airless spray equipment within each work area. Airless spray equipment must be capable of reaching all areas within each work area.

3.9 DECONTAMINATION SYSTEM

A. Worker Decontamination

1. The Contractor must establish on-site a decontamination enclosure consisting of equipment room, shower room, and clean room in series. Decontamination unit must be contiguous to the work area for negative pressure enclosure work procedures. Component removal work areas must have a minimum wash station (contiguous or remote).

2. Access between rooms in the decontamination system must be through double flap-curtained openings. The clean room, shower and equipment rooms within the decontamination enclosure must be completely sealed.

3. Construct the decontamination system with plastic, wood, or metal framing and cover both sides with a double layer of 6-mil poly, completely sealed with spray adhesive and tape at the joints.

4. The Contractor and the Engineer must visually inspect barriers routinely to assure effective seal; the Contractor must repair defects immediately.

3.10 GENERAL WORK PROCEDURES

A. Materials to be impacted by the project that were not previously tested must be considered to contain PCBs ≥50 ppm and removed/disposed in accordance with this Section. Notify Engineer immediately if such materials are encountered prior to initiating any abatement/removal actions.

B. Where negative pressure enclosures are required, all workers and authorized persons must enter and leave the Regulated Area through the contiguous airlock, leaving contaminated protective clothing in the airlock for disposal as PCB-contaminated waste. No one may eat, drink, smoke, chew gum or tobacco, or apply cosmetics while in the Regulated Area.

C. The Contractor must employ methods to remove assumed PCB-containing materials in a manner which minimizes the generation of dust and spread of PCB contamination.

1. The methods employed must not damage the integrity of the containment structure and must not create a breach through which dust may escape.

2. The Contractor must be responsible for all costs associated with decontamination and remediation in the case of a containment breach.

D. Mechanical cutting or grinding of PCB materials is not permitted unless the equipment has factory-equipped HEPA filtered exhaust and is conducted within a negative air enclosure with HEPA filtration exhaust.

E. In order to minimize the PCB concentrations inside the work area, the Contractor must remove the materials in manageable sections. In addition, PCB materials removed from any elevated level must be carefully lowered to the floor.

F. The Contractor must promptly place the PCB Waste material in disposal containers as it is removed. Large components removed intact may be wrapped in polyethylene sheeting and secured with tape. As the disposal containers are filled, the Contractor must promptly seal the containers, apply caution labels, and clean the containers before removal from the work area.

G. All waste containers must be leak-tight.

1. Containers must be decontaminated as described in Section 3.16 and HEPA- vacuumed prior to exiting the work area.

2. Clean each container thoroughly before moving to a Waste Holding Area.

H. After completion of PCB removal work, all surfaces from which PCB materials have been removed must be cleaned and HEPA-vacuumed to remove all visible material.

I. The Contractor must properly decontaminate the exteriors of the air filtration devices, scaffolding, ladders, extension cords, hoses, and other equipment inside the work area via cleaning and HEPA vacuuming.

J. The Contractor must also remove and containerize all visible accumulations of PCB Waste and/or PCB-contaminated debris from within the work areas.

K. Once the Regulated Area surfaces have dried, perform a thorough post abatement visual inspection. Surfaces within the regulated area, including but not limited to ledges, beams, and hidden locations will be inspected by the Engineer for visible residue. Evidence of dust contamination that would be indicative of PCB contamination identified during the inspection will necessitate further cleaning as heretofore specified. The area must be re-cleaned at the Contractor's expense, until the standard of no visible residue is achieved.

L. Prior to dismantling work areas and/or negative pressure containments, the Engineer will perform thorough visual inspections of the remaining substrates and polyethylene sheeting for cleanliness.

M. Remove and dispose any suspect materials observed on the ground.

3.11 WORK PROCEDURES – PAINTED COMPONENTS

A. The Contractor's Site Supervisor, as the OSHA Competent Person, must be at the site at all times during the performance of the abatement work.

B. Painted metal components to be impacted by the Project must be handled as follows at the Contractor's discretion:

1. Selective demolition and disposal of painted components as EPA (≥50 ppm) regulated PCB Bulk Product Waste and/or CTDEEP regulated PCB Waste (<50 ppm). Includes complete component removal.

2. Removal of paint from components to remain with disposal of paint as EPA and/or CTDEEP regulated PCB Waste.

a. Contractor must remove paint from metal components using one the following methods at the Contractor's Discretion:

1) Sandblasting in accordance with the Visual Standard No. 2, Near-White Blast Cleaned Surface Finish, of the National Association of Corrosion Engineers (NACE)

2) Paint stripping

3) Mechanical removal such as HEPA-attached hand grinders.

b. Where paint is removed via paint stripping and/or mechanical removal, post-remediation verification sampling via dust wipes may be collected and analyzed by the Engineer.

c. Contractor may elect to remove paint from components that will be removed using the methods listed above. If paint removal is completed for items to be removed, the metal can be recycled in accordance with Title 40 CFR Part 761 after it has been deemed clean by the Engineer.

C. All wastes generated during paint removal activities must be disposed of as PCB Remediation Waste in accordance with Title 40 CFR Part 761.

3.12 WORK PROCEDURES – PAINTED POROUS SURFACE REMOVAL

A. Painted porous surfaces that contain PCBs and will be impacted by the Project are to be removed and disposed as EPA and/or CTDEEP regulated PCB Waste in accordance with Table 1.

B. The Contractor must remove and dispose of the entire substrate system with the paint attached if component is scheduled for demolition and remove paint via mechanical removal and/or media blasting if component is scheduled to remain. Several PCB-containing building materials may also contain lead as identified in Section 13282 Lead Paint Management

C. Items schedule to remain in place:

1. Office Building (basement) structural brick/concrete walls, concrete columns, and stone foundation are scheduled to remain in place during the renovation project.

a. The Contractor must remove paint from the substrates and dispose of it as CTDEEP regulated PCB Waste.

b. Work shall be performed under enclosure procedures in accordance with this section.

c. After the source materials are removed, the Contractor shall thoroughly clean and HEPA vacuum the remaining substrates.

d. Remaining substrate surfaces will be tested by the Engineer following PCB paint removal. See Section 3.19 for additional information.

2. Spot removal of Office Building (exterior) tan façade paint/stucco

a. Defective paint/stucco and debris scraped from surfaces for repainting must be disposed of as Assumed EPA regulated PCB Bulk Product Waste.

3.13 WORK PROCEDURES FOR INCIDENTAL IMPACTS DURING CONSTRUCTION ACTIVITIES

A. Impacts during construction activities are classified as an incidental removal and include, but are not limited to, the following:

1. Drilling, cutting, or mounting to surfaces with assumed PCB-containing materials (Paints, etc.).

2. Creating new or enlarging existing openings in existing walls, floors, ceilings for doors, window, ductwork, louvers or hatches.

3. Drilling or coring holes through concrete walls, floors, ceiling for piping, ducts, electrical conduits, or equipment supports.

B. Work which disturbs assumed PCB-containing building materials and generates dust must be conducted using one the following engineering controls and work practices:

1. Conduct work utilizing the Glovebag removal method for small scale penetrations (< 3 square or linear feet) of assumed PCB-impacted surfaces. The Glovebag must be sealed air-tight with duct tape or similar and HEPA vacuums must be attached for negative pressure. Removal must be performed using wet methods. The glove bag and contents will require disposal as PCB Remediation Waste.

2. Conduct work within a mini-containment for areas for small scale penetrations (>3 square or linear feet) of assumed PCB-impacted surfaces. Mini-containment must be under a negative pressure and include a single layer of 6-mil poly sealed air-tight. Removal must be performed using wet methods. The waste generated will require disposal as PCB Remediation Waste.

C. Work which disturbs assumed PCB-containing building materials and does not generate dust must be conducted using wet methods and HEPA-vacuums.

D. The Contractor is responsible for estimating these incidental quantities based on the work proposed on the Project drawings and coordination with those trades performing that work.

3.14 DOUBLE WASH/RINSE CLEANING METHODS

A. First wash.

1. Cover the entire surface with cleaning solvent. Contain and collect any runoff solvent for disposal. Scrub rough surfaces with a scrub brush or disposable scrubbing pad and solvent such that each 900 cm^2 (1 square foot) of the surface is consistently wet for 1

minute. Wipe smooth surfaces with a solvent-soaked, disposable absorbent pad such that each 900 cm^2 (1 square foot) is wiped for 1 minute. Any surface <1 square foot must also be wiped for 1 minute. Wipe, mop, and/or sorb the solvent using absorbent material until no visible traces of the solvent remain.

B. First rinse.

1. Wet the surface with clean rinse solvent such that the entire surface is consistently wet for 1 minute. Drain and contain the solvent from the surface. Wipe the residual solvent off the drained surface using a clean, disposable, absorbent pad until no liquid is visible on the surface.

C. Second wash.

1. Repeat the procedures in paragraph (A) of this Part.

D. Second rinse.

1. Repeat the procedures in paragraph (B) of this Part.

E. All liquid wastes generated from the Double Wash Method must be disposed of in accordance with Title 40 CFR, Part 761.

F. All non-liquid wastes generated from the Double Wash Method (rags, swabbing material, PPE, and other solids) must be disposed of as PCB Remediation Waste.

3.15 CLEANING PROCEDURES

A. Cleaning must be completed by the Contractor following removal of PCB-containing building materials in any given work area.

1. Cleaning must also be performed at the end of each workday to prevent the migration of dust or debris to areas beyond the work limits.

B. A thorough final cleaning must be performed on all surfaces using the cleaning method described in this Section and HEPA filter-equipped vacuums.

C. Final cleaning includes removal of any contaminated material, equipment or debris (including polyethylene sheeting) from the work area and removal of all visible dusts on surfaces. All polyethylene sheeting must be packaged for disposal as a PCB Remediation Waste.

D. Special attention must be given to personal hygiene and cleaning of supplies and/or equipment.

3.16 DECONTAMINATION OF TOOLS

A. Contractor must decontaminate tools that may have been in contact with PCB materials.

B. Decontamination procedures must be in accordance with Title 40 CFR, Part 761.79(c)(2)(i), which includes swabbing non-porous tools with a non-chlorinated organic solvent. Or the Double Wash/Rinse Cleaning method described above.

3.17 MANAGEMENT OF PCB WASTES

A. All solid waste material, used PPE, and other solid wastes generated during the work, shall be placed directly in appropriate waste receptacles immediately upon removal from its in-situ position. Suitable waste receptacles may consist of roll-off containers or DOT-approved 55-gallon drums.

B. The Contractor shall be responsible for all packaging, labeling, transport, disposal, and recordkeeping associated with CTDEEP Regulated PCB Waste, PCB Bulk Product

Waste, and PCB Remediation Waste, in accordance with all federal, state, and local regulations.

C. Roll-off containers used to contain abatement wastes shall comply with the following requirements:

1. All roll-off containers or other similar vessels shall be watertight and lined with 6-mil poly or equivalent impermeable lining and equipped with a secured and impermeable cover.

2. The impermeable cover shall remain securely in place at all times when material is not being actively placed in the vessels. The Contractor shall be responsible for ensuring that the cover remains securely intact until the container is removed from the Site.

D. 55-gallon drums used for waste containerization shall be DOT-approved, watertight, and free of corrosion, perforations, punctures, or other damage. All drums shall be securely covered and sealed at the conclusion of each workday.

E. The waste containers shall remain staged at the site with a secure impermeable cover in-place until the materials are transported from the site for delivery to the designated waste disposal facility.

F. Waste roll-off and barrel staging area shall be designated prior to initiation of the abatement work and approved by the Engineer.

G. Non-liquid cleaning materials, PPE and similar materials resulting from decontamination are to be disposed of in accordance with TSCA requirements.

H. PCB-contaminated liquids generated during decontamination shall be disposed in accordance with TSCA requirements.

I. All PCB wastes shall be collected, packaged, and labeled by the Contractor for off-site disposal as PCB Waste under a waste manifest and/or bill of lading.

J. The following materials shall be collected, packaged, and labeled by the Contractor for off-site disposal as PCB Remediation Waste.

1. HEPA-vacuum bags and filters containing PCB dusts/debris.

2. Respirator cartridges, scrapers, tarps, suits, polyethylene sheeting, and other materials used for PCB removal.

3. Decontamination and cleaning waste (i.e., rags, swabbing materials, etc.).

K. The Owner will be the generator and will sign all waste profiles, bills of lading, and if appropriate and allowed under this specification, a hazardous waste manifest. The Engineer must review draft waste profiles and manifests prior to Owner and waste facility signing.

L. The Contactor is responsible for any additional analytical testing via the TCLP only to support off-site disposal of PCB waste materials generated during the project.

1. No sampling and/or analysis by the Contractor or affiliates of the Contractor (subcontractors, subconsultants, etc.) for total PCBs (Soxhlet Extraction) shall be performed at any point during the performance of the work, except as specifically authorized in writing by the Owner and Engineer.

2. The Contractor is responsible for selecting disposal facilities that can accept PCB wastes based on the available laboratory analytical data and supplemental TCLP testing identified above.

3. If the Contractor or affiliates of the Contractor (subcontractors, subconsultants, etc.) take unauthorized samples and analyze them for total PCBs, then the contractor will be responsible for the cost of any resulting removal required under existing state and federal regulations triggered by their sampling and analysis.

M. Provide fully executed waste disposal documentation as evidence that all PCB wastes have been received at a legal disposal facility..

N. Transport all materials off site in accordance with applicable State and Federal Department of Transportation Regulations.

O. All materials leaving the site shall become the responsibility of the Contractor.

3.18 MARKING AND DISPOSAL OF PCB WASTES

A. All waste containers must be marked with the name of the waste contained, the date in which the first material was placed in the vessel, and the last date at which addition of waste occurred. All waste containers must be marked with a large PCB M_L marker.

B. All waste containers containing PCB Bulk Product Waste and PCB Remediation Waste in the form of waste and contaminated debris, used PPE, personal and equipment wash water and decontamination fluids, or other wastes generated during the abatement work shall be labeled as follows:

DOT Class 9 UN3432 (solid)
Or UN2315 (liquid) PCB Waste
RQ
Waste for Disposal
Federal law prohibits improper disposal.
If found, contact the nearest police or public safety authority or
The U.S. Environmental Protection Agency.
Generator's Information: _____
Manifest Tracking No.: _____
Accumulation Start Date: _____
EPA ID No.: _____
EPA Waste No.: _____
Total Weight: _____
Container No.: _____
HANDLE WITH CARE

C. Such marking must be durable, in English and printed on, or affixed to the surface of the package, or on a label, tag or sign, and displayed on a background of sharply contrasting color, is unobscured by labels or attachments, and located away from any other marking (such as advertising) that could substantially reduce its effectiveness.

D. The Contractor shall be responsible for all packaging, labeling, transport, disposal, and recordkeeping associated with PCB Waste in accordance with all federal, state, and local regulations.

E. The Contractor shall ensure that the person transporting the waste holds a valid permit issued in accordance with appropriate federal, state, and local regulations.

F. The Contractor shall provide to the transporter at the time of transfer appropriate shipping records or uniform waste manifests as required by the federal, state, and local regulations with a copy to the Owner and Engineer.

G. The Contractor shall maintain proper follow-up procedures to assure that waste materials have been received by the designated waste site in a timely manner, and in accordance with all federal, state, and local regulations.

H. All PCB waste must be removed from the site within 30 days of generation.

I. PCB Bulk Product Waste

1. PCB Bulk Product Waste must be removed and transported off-site for disposal in accordance with Title 40 CFR, Part 761.62(b). PCB Bulk Product Waste must be disposed in a solid waste disposal facility permitted to accept PCB Bulk Product Waste.

2. Waste characterization sampling must be conducted by the Contractor if additional analytical data is needed to confirm disposal facility's ability to accept the waste. If sampling is required, Contractor must submit and receive approval from Engineer for collection and analysis of such samples.

J. Solid PCB Remediation Waste

1. Solid PCB Remediation Waste includes the following:

   a. Solid waste generated during PCB remediation including, but not limited to, containment barriers, PPE, cleaning supplies, etc.

2. Solid PCB Remediation Waste must be removed and transported off-site for disposal in accordance with Title 40 CFR, Part 761.61(a)(5)(i)(B)(2) at a permitted facility. The disposal facility selected must be permitted as one of the following:

   a. Hazardous waste facility permitted by EPA under section 3004 of RCRA

   b. State authorized under section 3006 of RCRA

   c. A chemical waste facility approved under Title 40 CFR Part 761.75

K. Liquid PCB Remediation Waste

1. Liquid PCB Remediation Waste for this project is liquid waste generated during PCB remediation including, but not limited to, cleaning wastewater and/or liquid, equipment decontamination wastewater and/or liquid, personal decontamination wastewater and/or liquid, etc.

2. Liquid PCB Remediation Waste must be removed and transported off-site for disposal in accordance with Title 40 CFR Part 761.60(a).

L. The Owner will be the generator and will sign all waste profiles, bills of lading, and if appropriate and allowed under this specification, a hazardous waste manifest. Draft waste profiles and manifests must be reviewed by Engineer prior to Owner review.

M. The Contactor is responsible for additional analytical testing via the TCLP only to support off-site disposal of PCB waste materials generated during the project. TCLP requirements are found in Section 3.14.

N. Provide evidence that all PCB wastes have been received at a legal disposal facility. The means for such proof shall be truck weight slips/signed shipping documents from an approved disposal facility. Transport of all materials off site shall be in accordance with applicable Department of Transportation Regulations. All materials leaving the site shall become the responsibility of the Contractor.

O. When the specifications call for the measurement of PCB-contaminated materials for unit pricing, the materials shall be segregated from other materials unless otherwise authorized in writing by the Owner and Engineer.

P. All contaminated waste shall be carefully loaded on trucks or other appropriate vehicles for transport. Before and during transport, care shall be exercised to ensure that no unauthorized persons have access to the waste materials.

Q. Waste transporters are prohibited from "back hauling" any freight after the PCB waste disposal, until decontamination of the vehicle and/or trailer is completed.

3.19 ENGINEER'S POST-REMEDIATON VERIFICATION SAMPLING REQUIREMENTS

A. The Engineer will conduct post-remediation verification sampling following removal of certain CTDEEP regulated PCB Wastes.

B. Porous Substrate Sampling

1. Verification sampling will be performed by the Engineer following removal of interior white paint from brick walls, concrete columns/walls, ceilings and stone foundation (as CTDEEP regulated PCB Waste) to confirm that the remedial objective of removal of all PCB waste with concentrations >1 ppm has been achieved.

a. Engineer will visually assess the work area following notification from Contractor that all PCB containing wastes have been removed from the substrates. If visible PCB waste is observed on the substrates sampling will not occur and the Contractor will be instructed to perform additional removal actions.

b. Verification sampling will be completed once Contractor and Engineer agree that all PCB waste has been removed from the substrates.

2. Containments must remain in place until abatement/remediation is determined to be complete based on laboratory analytical results of verification samples collected.

3. Additional cleaning and/or material removal will be required if PCB concentrations >1 ppm are reported in the verification samples.

4. The Contractor shall anticipate a minimum five-day laboratory turnaround time for receipt of each round of verification analytical results.

3.20 ENGINEER'S INSPECTION RESPONSIBILITIES

A. The Engineer will conduct inspections throughout the progress of the removal project.

B. Inspections will be conducted to document the progress of the removal work as well as the procedures and practices employed by the Contractor.

C. The Engineer will perform the following inspections during the course of abatement activities:

1. Pre-commencement Inspection. Pre-commencement inspections will be performed at the time requested by the Contractor. The Engineer will be informed a minimum of 48

hours prior to the time the inspection is needed. If, deficiencies are identified, the Contractor must perform the necessary adjustments to obtain compliance.

2. Work Area Inspections. Work area inspections will be conducted at the discretion of the Engineer. During the course of the work inspections, the Engineer will observe the Contractor's removal means and/or methods, verify barrier integrity, monitor negative air filtration devices, assess project progress, and inform the Contractor of specific remedial activities if deficiencies are noted.

3. Final Visual Inspection. The Engineer will conduct final visual inspection upon the request of the Contractor. The Engineer must be informed a minimum of 48 hours prior to the time the inspection is needed. The final visual inspection will be conducted after completion of the final cleaning procedures. If the Engineer identifies residual waste, dust or debris, the Contractor must complete additional cleaning as needed to render the area “dust free” as determined by Engineer.

TABLE 1 - LIST OF PCB-CONTAINING BUILDING MATERIALS

PCB-CONTAINING MATERIAL	MATERIAL LOCATION	SUBSTRATE	APPROXIMATE QUANTITY*	PCB WASTE STREAM	COMMENTS
Interior Wall and Ceiling Paints (multiple colors)	Office Building (floors 1-2)	Plaster and Gypsum	35,000 SF	CTDEEP Regulated PCB Waste <50 PPM	Full component demolition and removal (including substrates).
Interior Door/Window Systems and Trim/Baseboard Paint	Office Building (floors 1-2)	Wood	3,000 SF		
Exterior Tan Window System Paint	Office Building (2nd floor)	Wood	30 EA	EPA Regulated PCB Bulk Product Waste ≥50 PPM	Full component demolition and removal (including substrates). Protect window openings during abatement and when installing barriers.
Interior White Wall, Foundation, Column, Doors, and Ceiling Paint	Office Building (basement)	Brick (walls), Concrete (walls & columns), Stone (foundation), and Wood (doors & ceiling)	10,000 SF	CTDEEP Regulated PCB Waste <50 PPM	Substrates scheduled to remain. Mechanical removal (sandblasting, grinding, etc.) must be conducted within a negative pressure enclosure
Interior Steel Support Beam Paint(1)	Office Building (floors 1-2)	Metal	TBD based off scope	EPA Regulated PCB Bulk Product Waste ≥50 PPM	Paints scheduled to be drilled, scraped, cleaned, spot primed and repainted.
Exterior Tan Façade Paint/Stucco	Office Building Exterior	Stucco			
Interior Brown Door System Paint	Machine Shop Office	Wood	11 EA	CTDEEP Regulated PCB Waste <50 PPM	Full component demolition and removal (including substrates).
Interior Gray Wall Paint	Machine Shop	Plaster	8,000 SF		
Green Air Compressor Paint	Machine Shop	Metal(2)	1 EA / 400 SF		
Interior Red Steel Support Column Paint	Machine Shop	Metal	TBD based off scope		Paints scheduled to be drilled, scraped, cleaned, spot primed and repainted.
Green Air Handler Paint(1)	Maintenance Garage	Metal(2)	1 EA / 120 SF	CTDEEP Regulated PCB Waste <50 PPM	Full component demolition and removal (including substrates).

PCB-CONTAINING MATERIAL	MATERIAL LOCATION	SUBSTRATE	APPROXIMATE QUANTITY*	PCB WASTE STREAM	COMMENTS
Interior Gray Wall Paint(1)	Hazardous Waste Storage Building (control room)	Metal(2)	100 SF	CTDEEP Regulated PCB Waste <50 PPM	Full component demolition and removal (including substrates).
Interior White Wall Paint	Quonset Hut Building (hazardous waste storage room)	Wood	300 SF	CTDEEP Regulated PCB Waste <50 PPM	Full component demolition and removal (including substrates).
Capstone and Chimney Caulk	Office Building Roof	Capstones/Brick	108 LF	EPA Regulated PCB Bulk Product Waste ≥50 PPM	Remove all caulk and residue. Caulk also contains asbestos.

Legend
(1) = Lead-Based Paint
(2) = Metal components may be recycled at a facility that accepts CTDEEP/EPA Regulated PCB Waste and Lead-Based Paint.
TBD = To be Determined, PPM= Parts Per Million, SF = Square Feet, EA = Each

* Approximate quantities included in this Table are provided to establish an order of magnitude for the amount of material that must be abated. Actual quantities may vary. It is the sole responsibility of the Contractor to visit the site, review the Contract Documents and determine the quantities of materials to be removed when developing their Bid.

END OF SECTION

APPENDIX H: Drawings

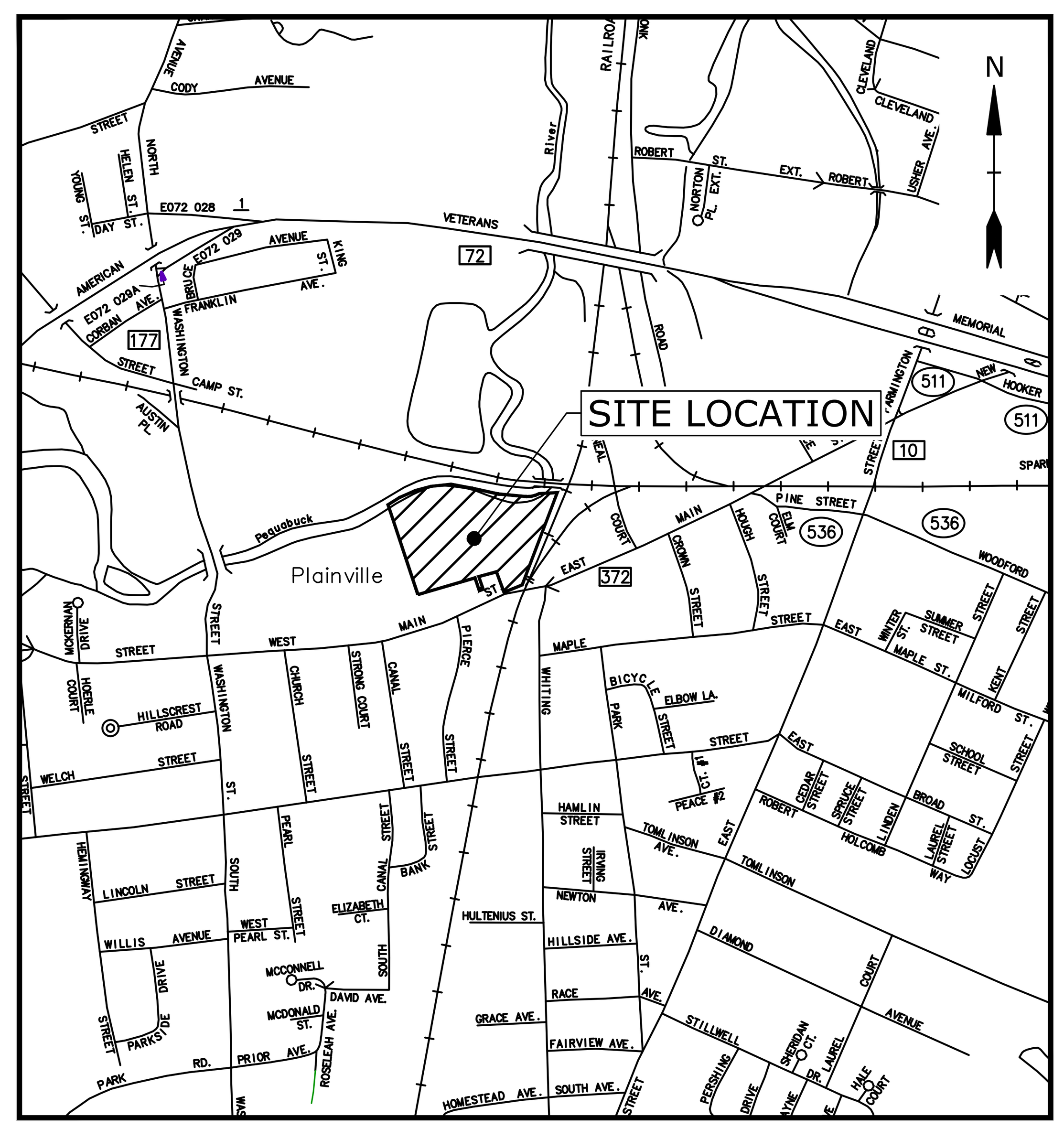
TOWN OF PLAINVILLE, CONNECTICUT

1 & 63 WEST MAIN STREET HAZARDOUS BUILDING MATERIALS ABATEMENT

FOR CONSTRUCTION

JUNE 21, 2023

LIST OF DRAWINGS		
SHEET NO.	DRAWING NO.	DRAWING TITLE
GENERAL		
		COVER SHEET
HAZARDOUS BUILDING MATERIALS		
1	HM-1.0	OFFICE BUILDING SECOND FLOOR HAZARDOUS BUILDING MATERIALS ABATEMENT PLAN
2	HM-1.1	OFFICE BUILDING FIRST FLOOR HAZARDOUS BUILDING MATERIALS ABATEMENT PLAN
3	HM-1.2	OFFICE BUILDING BASEMENT HAZARDOUS BUILDING MATERIALS ABATEMENT PLAN
4	HM-1.3	MACHINE SHOP OFFICE HAZARDOUS BUILDING MATERIALS ABATEMENT PLAN
5	HM-1.4	MACHINE SHOP HAZARDOUS BUILDING MATERIALS ABATEMENT PLAN
6	HM-1.5	MAINTENANCE GARAGE HAZARDOUS BUILDING MATERIALS ABATEMENT PLAN
7	HM-1.6	QUONSET HUT AND QUONSET HUT ADDITION HAZARDOUS BUILDING MATERIALS ABATEMENT PLAN



LOCATION MAP
SCALE: 1" = 1000'

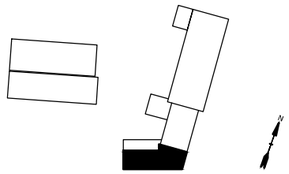
PREPARED BY:
Tighe&Bond

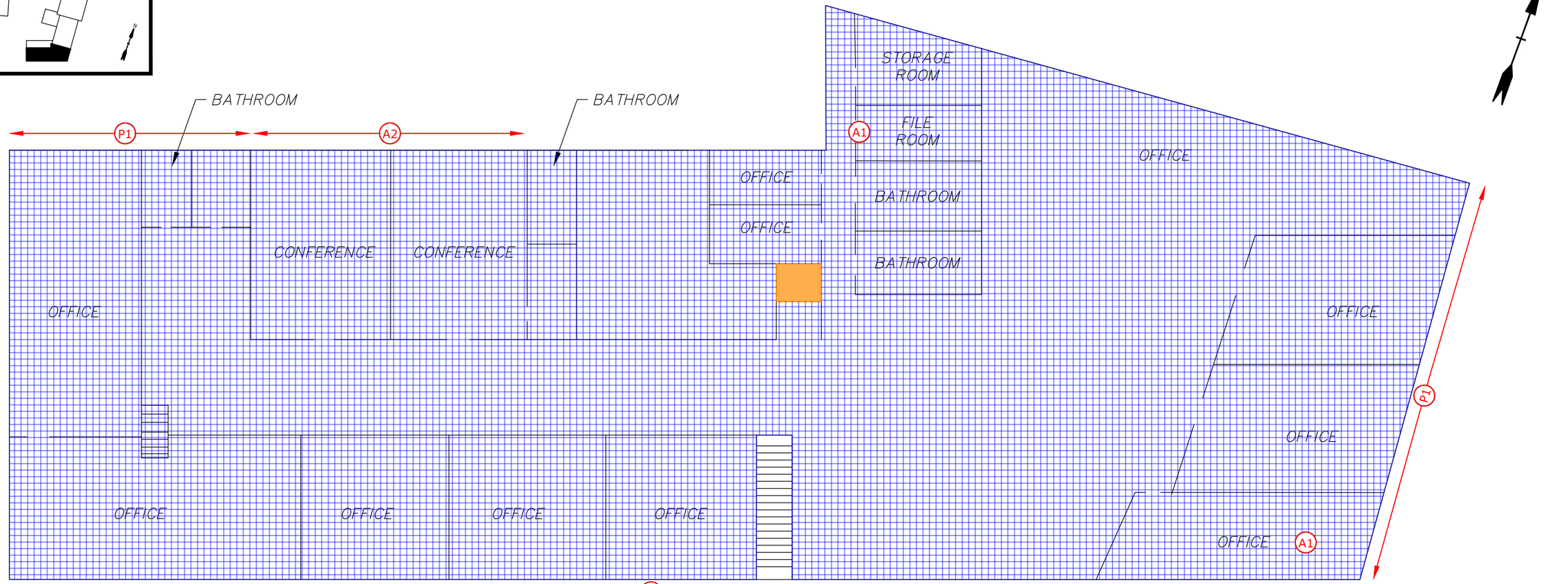
PREPARED FOR:
TOWN OF PLAINVILLE
1 CENTRAL SQUARE
PLAINVILLE, CT 06062

COMPLETE SET 7 SHEETS

Last Saved: 6/21/2023
Plotted On:Jun 21, 2023-9:00am By: IAdomeit
Tighe & Bond: \\tighebond.com\data\Data\Projects\P\P0659 Plainville, CT\030 West Main Brownfields\Drawings\AutoCAD\P-0659-030-B-HBM-COVER.dwg

MAP KEY





FULL BUILDING INTERIOR ABATEMENT SPECIFIC NOTES

REMOVE AND DISPOSE OF FOLLOWING BUILDING COMPONENTS AS CTDEEP REGULATED PCB WASTE <50 PPM:

- PAINTED GYPSUM AND PLASTER WALLS AND CEILINGS.
- WHITE PAINTED WOOD DOOR SYSTEMS, WINDOW SYSTEMS, AND BASEBOARDS.

GENERAL NOTES

1. APPROXIMATE QUANTITIES INCLUDED IN THE ABATEMENT SPECIFICATIONS AND SHOWN ON THE DRAWINGS ARE PROVIDED TO ESTABLISH AN ORDER OF MAGNITUDE FOR THE AMOUNT OF MATERIAL THAT MUST BE ABATED. ACTUAL QUANTITIES MAY VARY. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE, REVIEW THE CONTRACT DOCUMENTS, AND DETERMINE THE QUANTITIES OF MATERIALS TO BE REMOVED WHEN DEVELOPING THEIR BID.
2. CONTRACTOR MUST TAKE ALL NECESSARY PRECAUTIONS NOT TO DAMAGE WINDOW OPENINGS OR DETRACT FROM THEIR AESTHETIC QUALITY WHEN REMOVING THE ACTUAL WINDOWS AND INSTALLING BARRIERS AS IS REQUIRED IN THE ABATEMENT SPECIFICATIONS.

ASBESTOS REMOVAL KEY

AC - ASBESTOS CONTAINING

REMOVE AND DISPOSE OF AC FLOOR TILE, BLACK MASTIC, LEVELER, ADHESIVE, CARPETING, AND WOOD SUBFLOOR AS ASBESTOS WASTE.

REMOVE AND DISPOSE OF AC VINYL STAIR TREAD AND ADHESIVE AS ASBESTOS WASTE.

A1 REMOVE AND DISPOSE OF PRESUMED AC VAULT DOOR AND SAFE AS ASBESTOS WASTE.

A2 REMOVE AND DISPOSE OF AC EXTERIOR WINDOW GLAZING AND METAL FRAMING AS ASBESTOS WASTE.

NOTE: AC MATERIAL EXISTS WITHIN METAL WINDOW FRAME.

PCB REMEDIATION KEY

P1 REMOVE AND DISPOSE OF EXTERIOR TAN WINDOW PAINT AND WOOD SUBSTRATES (SASH, FRAME, SILL, ETC.) AS EPA REGULATED PCB WASTE ≥50 PPM.

PCB REMEDIATION NOTES

REMOVE AND DISPOSE OF THE FOLLOWING MATERIALS AS PRESUMED EPA REGULATED BULK PRODUCT WASTE ≥50 PPM PCBs. LOCATION AND QUANTITIES OF EXTERIOR STUCCO AND STEEL SUPPORT BEAM PAINT TO BE REMOVED WILL BE DICTATED BY FINAL CONSTRUCTION PLANS.

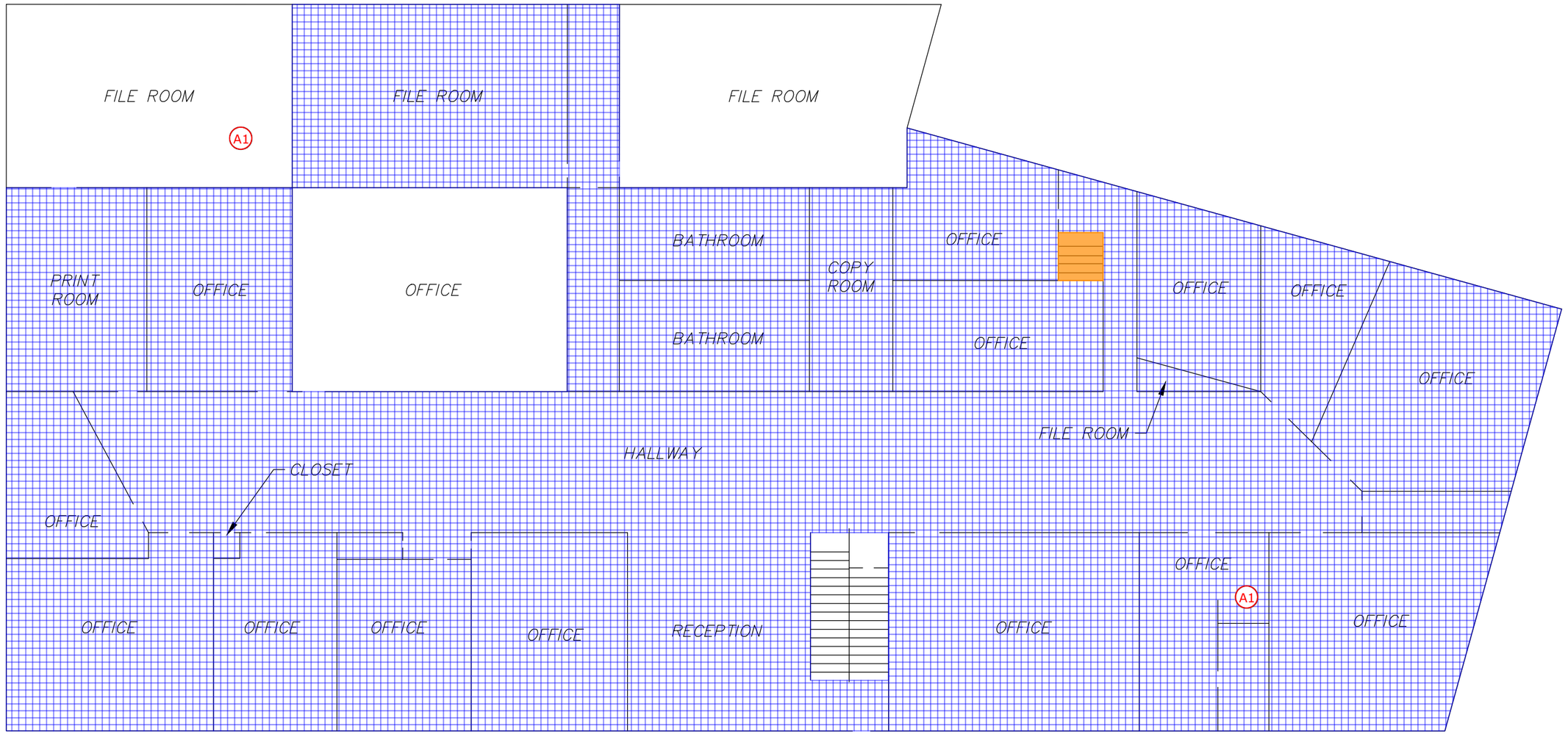
- TAN EXTERIOR FAÇADE PAINT/STUCCO
- INTERIOR STEEL SUPPORT BEAM PAINT
- CAPSTONE AND CHIMNEY CAULK

1 & 63 WEST MAIN STREET
PLAINVILLE, CT

OFFICE BUILDING SECOND FLOOR
HAZARDOUS BUILDING MATERIALS
ABATEMENT PLAN

DATE:	6/21/2023
SCALE:	NO SCALE
FIGURE	HM-1.0

Tighe&Bond



WEST MAIN STREET

FULL BUILDING INTERIOR ABATEMENT SPECIFIC NOTES

REMOVE AND DISPOSE OF FOLLOWING BUILDING COMPONENTS AS CTDEEP REGULATED PCB WASTE <50 PPM:

- PAINTED GYPSUM AND PLASTER WALLS AND CEILINGS.
- WHITE PAINTED WOOD DOOR SYSTEMS, WINDOW SYSTEMS, AND BASEBOARDS.

GENERAL NOTES

1. APPROXIMATE QUANTITIES INCLUDED IN THE ABATEMENT SPECIFICATIONS AND SHOWN ON THE DRAWINGS ARE PROVIDED TO ESTABLISH AN ORDER OF MAGNITUDE FOR THE AMOUNT OF MATERIAL THAT MUST BE ABATED. ACTUAL QUANTITIES MAY VARY. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE, REVIEW THE CONTRACT DOCUMENTS, AND DETERMINE THE QUANTITIES OF MATERIALS TO BE REMOVED WHEN DEVELOPING THEIR BID.

ASBESTOS REMOVAL KEY

AC - ASBESTOS CONTAINING

REMOVE AND DISPOSE OF AC FLOOR TILE, BLACK MASTIC, LEVELER, ADHESIVE, CARPETING, AND WOOD SUBFLOOR AS ASBESTOS WASTE.

NOTE: AC MATERIAL EXISTS BELOW CARPETING, PLYWOOD FLOORING, AND CERAMIC FLOORING.

REMOVE AND DISPOSE OF AC VINYL STAIR TREAD AND ADHESIVE AS ASBESTOS WASTE.

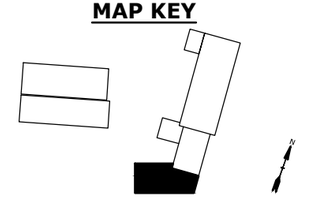
A1 REMOVE AND DISPOSE OF PRESUMED AC SAFE AS ASBESTOS WASTE.

PCB REMEDIATION NOTES

REMOVE AND DISPOSE OF THE FOLLOWING MATERIALS AS PRESUMED EPA REGULATED BULK PRODUCT WASTE ≥50 PPM PCBs. LOCATION AND QUANTITIES OF EXTERIOR STUCCO AND STEEL SUPPORT BEAM PAINT TO BE REMOVED WILL BE DICTATED BY FINAL CONSTRUCTION PLANS.

- TAN EXTERIOR FAÇADE PAINT/STUCCO
- INTERIOR STEEL SUPPORT BEAM PAINT
- CAPSTONE AND CHIMNEY CAULK

MAP KEY



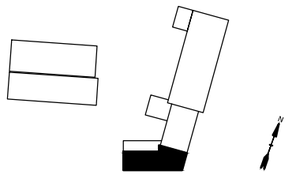
1 & 63 WEST MAIN STREET
PLAINVILLE, CT

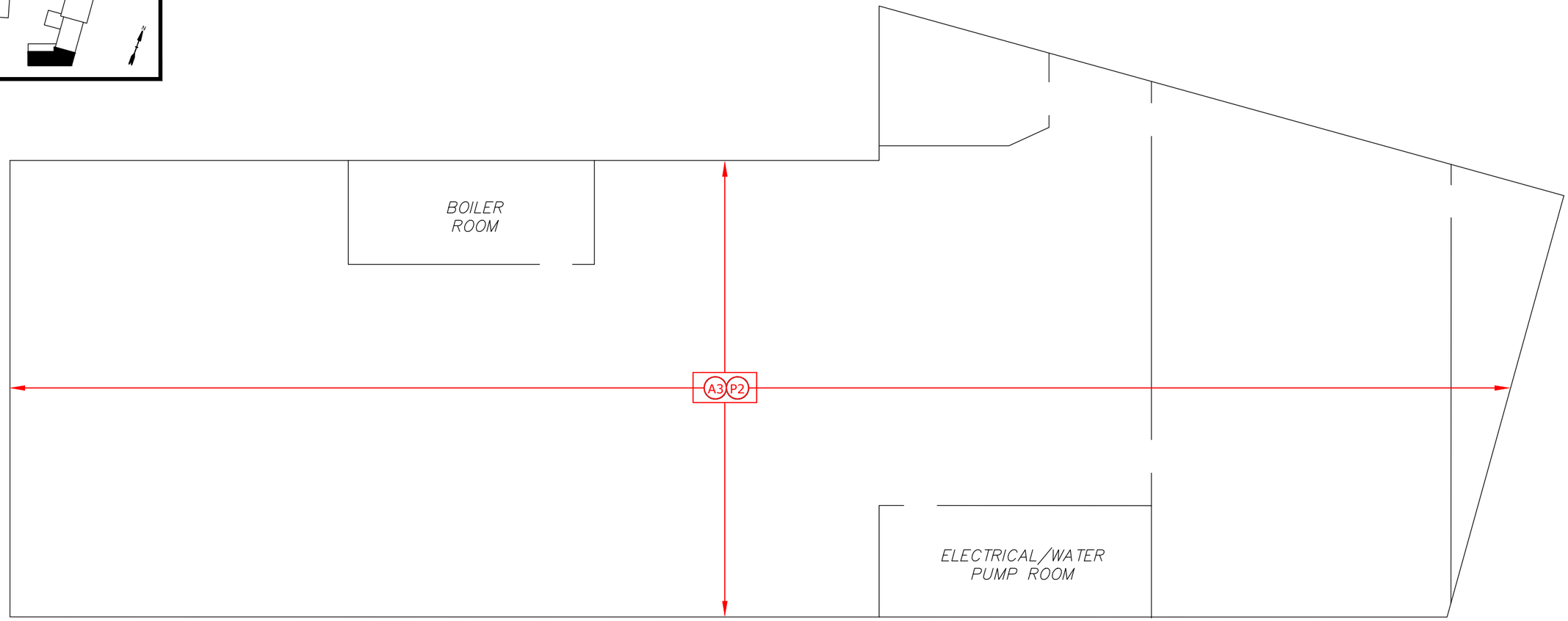
OFFICE BUILDING FIRST FLOOR
HAZARDOUS BUILDING MATERIALS
ABATEMENT PLAN

DATE:	6/21/2023
SCALE:	NO SCALE
FIGURE	HM-1.1

Tighe&Bond

MAP KEY





FULL BUILDING INTERIOR ABATEMENT SPECIFIC NOTES

REMOVE AND DISPOSE OF FOLLOWING BUILDING COMPONENTS AS CTDEEP REGULATED PCB WASTE <50 PPM:

- PAINTED GYPSUM AND PLASTER WALLS AND CEILINGS.
- WHITE PAINTED WOOD DOOR SYSTEMS, WINDOW SYSTEMS, AND BASEBOARDS.

GENERAL NOTES

1. APPROXIMATE QUANTITIES INCLUDED IN THE ABATEMENT SPECIFICATIONS AND SHOWN ON THE DRAWINGS ARE PROVIDED TO ESTABLISH AN ORDER OF MAGNITUDE FOR THE AMOUNT OF MATERIAL THAT MUST BE ABATED. ACTUAL QUANTITIES MAY VARY. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE, REVIEW THE CONTRACT DOCUMENTS, AND DETERMINE THE QUANTITIES OF MATERIALS TO BE REMOVED WHEN DEVELOPING THEIR BID.

ASBESTOS REMOVAL KEY

AC - ASBESTOS CONTAINING

(A3) REMOVE AND DISPOSE OF AC PIPE AND/OR PIPE FITTING INSULATION, AND PIPE SEALANT AS ASBESTOS WASTE.

PCB REMEDIATION KEY

(P2) REMOVE AND DISPOSE OF WHITE WALL, COLUMN, CEILING, AND DOOR PAINT AS CTDEEP REGULATED PCB WASTE <50 PPM. REMOVAL BY MECHANICAL MEANS MUST BE PERFORMED WITHIN A NEGATIVE PRESSURE ENCLOSURE. SEE SECTION 13286 FOR MORE INFORMATION.

PCB REMEDIATION NOTES

REMOVE AND DISPOSE OF THE FOLLOWING MATERIALS AS PRESUMED EPA REGULATED BULK PRODUCT WASTE ≥50 PPM PCBs. LOCATION AND QUANTITIES OF EXTERIOR STUCCO AND STEEL SUPPORT BEAM PAINT TO BE REMOVED WILL BE DICTATED BY FINAL CONSTRUCTION PLANS.

- TAN EXTERIOR FAÇADE PAINT/STUCCO
- INTERIOR STEEL SUPPORT BEAM PAINT
- CAPSTONE AND CHIMNEY CAULK

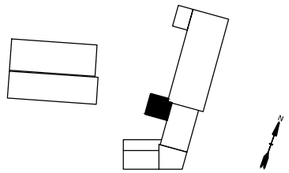
1 & 63 WEST MAIN STREET
PLAINVILLE, CT

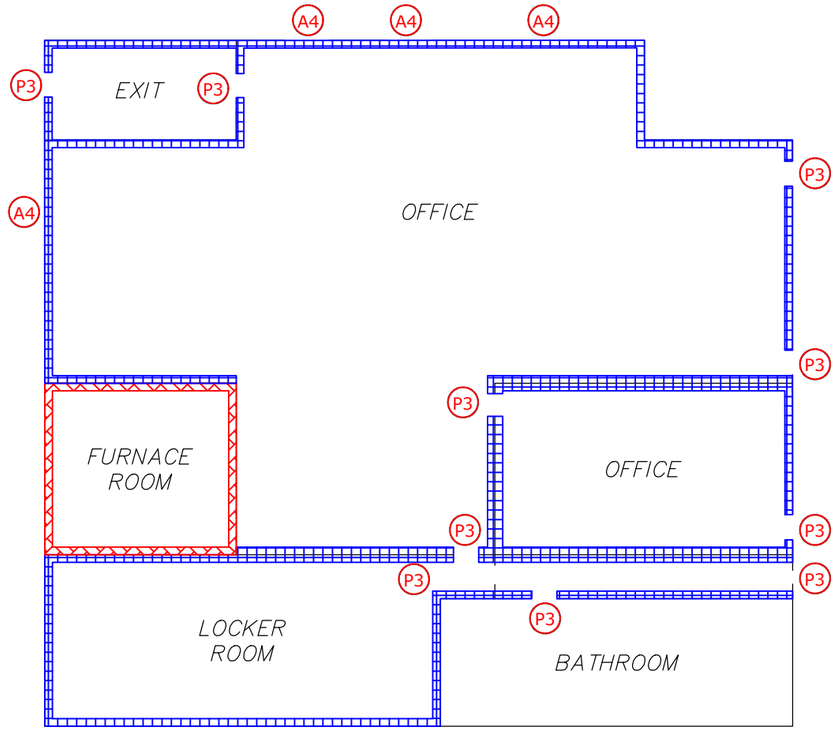
OFFICE BUILDING BASEMENT
HAZARDOUS BUILDING MATERIALS
ABATEMENT PLAN

DATE:	6/21/2023
SCALE:	NO SCALE
FIGURE	HM-1.2

Tighe&Bond

MAP KEY





GENERAL NOTES

1. APPROXIMATE QUANTITIES INCLUDED IN THE ABATEMENT SPECIFICATIONS AND SHOWN ON THE DRAWINGS ARE PROVIDED TO ESTABLISH AN ORDER OF MAGNITUDE FOR THE AMOUNT OF MATERIAL THAT MUST BE ABATED. ACTUAL QUANTITIES MAY VARY. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE, REVIEW THE CONTRACT DOCUMENTS, AND DETERMINE THE QUANTITIES OF MATERIALS TO BE REMOVED WHEN DEVELOPING THEIR BID.

ASBESTOS REMOVAL KEY

AC - ASBESTOS CONTAINING

REMOVE AND DISPOSE OF AC WALL PANEL ADHESIVE AND ASSOCIATED WOOD PANELING/GYPSUM WALLS AS ASBESTOS WASTE.

REMOVE AND DISPOSE OF AC CEMENTITIOUS WALL PANELING AS ASBESTOS WASTE.

(A4) REMOVE AND DISPOSE OF AC EXTERIOR WINDOW GLAZING AS ASBESTOS WASTE.

PCB REMEDIATION KEY

(P3) REMOVE AND DISPOSE OF BROWN PAINTED WOOD DOOR SYSTEM AS CTDEEP REGULATED PCB WASTE <50 PPM.

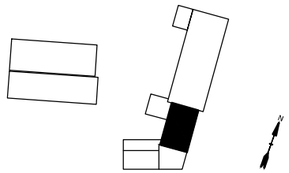
1 & 63 WEST MAIN STREET
PLAINVILLE, CT

MACHINE SHOP OFFICE
HAZARDOUS BUILDING MATERIALS
ABATEMENT PLAN

DATE:	6/21/2023
SCALE:	NO SCALE
FIGURE	HM-1.3

Tighe&Bond

MAP KEY



GENERAL NOTES

1. APPROXIMATE QUANTITIES INCLUDED IN THE ABATEMENT SPECIFICATIONS AND SHOWN ON THE DRAWINGS ARE PROVIDED TO ESTABLISH AN ORDER OF MAGNITUDE FOR THE AMOUNT OF MATERIAL THAT MUST BE ABATED. ACTUAL QUANTITIES MAY VARY. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE, REVIEW THE CONTRACT DOCUMENTS, AND DETERMINE THE QUANTITIES OF MATERIALS TO BE REMOVED WHEN DEVELOPING THEIR BID.

PCB REMEDIATION KEY

(P4) REMOVE AND DISPOSE OF GRAY PAINTED PLASTER WALL SYSTEMS AS CTDEEP REGULATED PCB WASTE <50 PPM.

(P5) REMOVE AND DISPOSE OF GREEN PAINTED METAL AIR COMPRESSOR TANK AS CTDEEP REGULATED PCB WASTE <50 PPM.

PCB REMEDIATION NOTES

REMOVE AND DISPOSE OF THE FOLLOWING MATERIALS AS PRESUMED CTDEEP REGULATED PCB WASTE <50 PPM. LOCATION AND QUANTITIES OF STEEL SUPPORT BEAM PAINT TO BE REMOVED WILL BE DICTATED BY FINAL CONSTRUCTION PLANS.

- INTERIOR RED STEEL SUPPORT BEAM PAINT

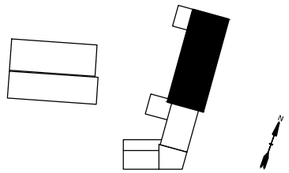
1 & 63 WEST MAIN STREET
PLAINVILLE, CT

MACHINE SHOP
HAZARDOUS BUILDING MATERIALS
ABATEMENT PLAN

DATE:	6/21/2023
SCALE:	NO SCALE
FIGURE	HM-1.4

Tighe&Bond

MAP KEY



GENERAL NOTES

1. APPROXIMATE QUANTITIES INCLUDED IN THE ABATEMENT SPECIFICATIONS AND SHOWN ON THE DRAWINGS ARE PROVIDED TO ESTABLISH AN ORDER OF MAGNITUDE FOR THE AMOUNT OF MATERIAL THAT MUST BE ABATED. ACTUAL QUANTITIES MAY VARY. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE, REVIEW THE CONTRACT DOCUMENTS, AND DETERMINE THE QUANTITIES OF MATERIALS TO BE REMOVED WHEN DEVELOPING THEIR BID.

ASBESTOS REMOVAL KEY

AC - ASBESTOS CONTAINING

A5 REMOVE AND DISPOSE OF AC PIPE INSULATION AS ASBESTOS WASTE.

PCB REMEDIATION KEY

P6 REMOVE AND DISPOSE OF GREEN PAINTED METAL AIR HANDLER UNIT AS CTDEEP REGULATED PCB WASTE <50 PPM.

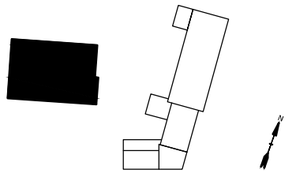
1 & 63 WEST MAIN STREET
PLAINVILLE, CT

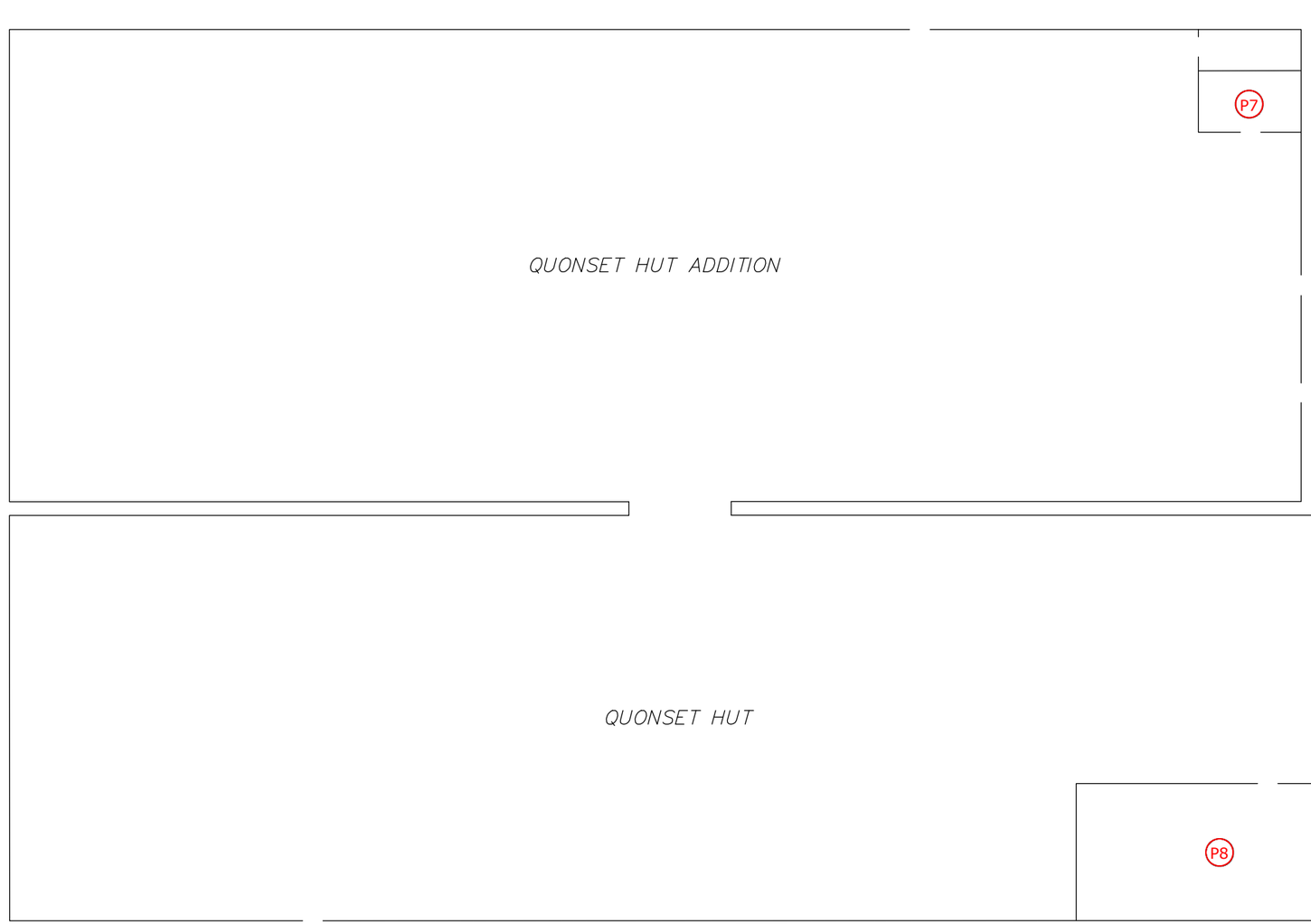
MAINTENANCE GARAGE HAZARDOUS BUILDING MATERIALS ABATEMENT PLAN

DATE:	6/21/2023
SCALE:	NO SCALE
FIGURE	HM-1.5

Tighe&Bond

MAP KEY





GENERAL NOTES

1. APPROXIMATE QUANTITIES INCLUDED IN THE ABATEMENT SPECIFICATIONS AND SHOWN ON THE DRAWINGS ARE PROVIDED TO ESTABLISH AN ORDER OF MAGNITUDE FOR THE AMOUNT OF MATERIAL THAT MUST BE ABATED. ACTUAL QUANTITIES MAY VARY. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE, REVIEW THE CONTRACT DOCUMENTS, AND DETERMINE THE QUANTITIES OF MATERIALS TO BE REMOVED WHEN DEVELOPING THEIR BID.

PCB REMEDIATION KEY

P7 REMOVE AND DISPOSE OF GRAY PAINTED METAL WALLS AS CTDEEP REGULATED PCB WASTE <50 PPM.

P8 REMOVE AND DISPOSE OF WHITE PAINTED WOOD WALLS AS CTDEEP REGULATED PCB WASTE <50 PPM.

1 & 63 WEST MAIN STREET
PLAINVILLE, CT

QUONSET HUT AND QUONSET HUT ADDITION HAZARDOUS BUILDING MATERIALS ABATEMENT PLAN

DATE:	6/21/2023
SCALE:	NO SCALE
FIGURE	HM-1.6

Tighe&Bond