
BULLETIN #1

New London HS – Phase 2 Early Hazmat Package

February 22, 2019

Clarifications:

- 1.) The bid date, time & place are unchanged by this bulletin.
- 2.) A non-mandatory pre-bid walk-through meeting was held on February 19th, 2019. See the attached agenda & sign-in sheet for reference.
- 3.) Specification Section 028320 “Lead Dust Reduction”, shall be replaced in its entirety with revised specification section 028320 “Lead Dust Reduction”, attached within addendum #1.
- 4.) Bidder Question #1- “Are there any TCLP testing on the lead concrete scheduled for disposal as hazardous for lead? The potential disposal facilities are requesting this information.”
 - a. Response from the consultant (Fuss & O’Neill) – “Contractors should refer to specification section 028319 – Lead Paint Awareness, paragraph 3.7, Waste Disposal;

A. The Contractor's contractual liability shall be the proper disposal of all non-hazardous wastes generated at the Site in accordance with all applicable federal, state, and local regulations as referenced herein.

- 1. Fuss & O’Neill Inc. did not collect a sample for TCLP analysis for disposal characterization of the anticipated waste stream. The Contractor shall be responsible for collecting a waste characterization sample for TCLP analysis, as is required by the disposal site. Results of the TCLP analysis shall be forwarded by the Contractor to the Consultant prior to the waste being transported off of the Site. If the analytical result of the TCLP is > 5.0 milligrams per liter (mg/L), the waste shall be considered hazardous and transported and disposed as such. OR: If the analytical result of the TCLP is < 5.0 milligrams per liter (mg/L), the waste shall be considered non-hazardous and transported and disposed as such. Contractor shall bid work as Hazardous Materials.*

Attachments:

- 1.) Antinozzi Associates Addendum #1 Dated February 22nd, 2019 (19 Pages)
- 2.) February 19th, 2017 Pre-Bid Meeting Agenda (3 Pages)
- 3.) February 19th, 2017 Pre-Bid Meeting Sign-In Sheet (1 Page)

ADDENDUM #1

February 22, 2019

**RE: PHASE 2 EARLY HAZ-MAT PACKAGE
ADDITIONS & RENOVATIONS
NEW LONDON HIGH SCHOOL
Jefferson Avenue & Chester Street
New London, CT 06320**

Antinozzi Project #15050
State Project #095-0090 MAG/N

FROM: ANTINOZZI ASSOCIATES, P.C.

TO: PROSPECTIVE BIDDERS

This Addendum shall be part of the Contract Documents and modifies the original bidding documents. This Addendum is to be acknowledged by the Bidder on the Bid Form. Failure to do so may subject the Bidder to disqualification. **The Bid Date remains February 26, 2019**

CHANGES BY PRIOR ADDENDA:

1. None: This is the first addendum.

RFI RESPONSES & CLARIFICATIONS:

1. DRAWING HM-003:

The asbestos-containing insulation to be removed from the water tank in Storage Room G13 can be removed through the existing door to the exterior on the south side of the space and disposed of in a dumpster at Location "A". It will no longer be necessary to have a dumpster provided at Location "C" that would have required that the tank insulation be brought either through the Servery/Cafeteria/Stairway or through the Servery/Custodial Area to get to Location "C".

2. SKETCH AD-HM-01

This sketch from the original blueprints is being issued to indicate the amount of existing ductwork in the Lead Clean-Up Areas, Rooms A8, A9, A10 and G38, to allow the Bidders to better estimate the amount of insulation that must be removed from this ductwork as part of the clean-up of the areas.

CHANGES TO SPECIFICATIONS:

1. SECTION 028320

A revised Section 028320 is being issued as a part of this Addendum #01.

CHANGES TO DRAWINGS:

None at this time.

ADDENDUM #1:

Antinozzi Associates

New London High School

Phase 2 Early Haz-Mat Package

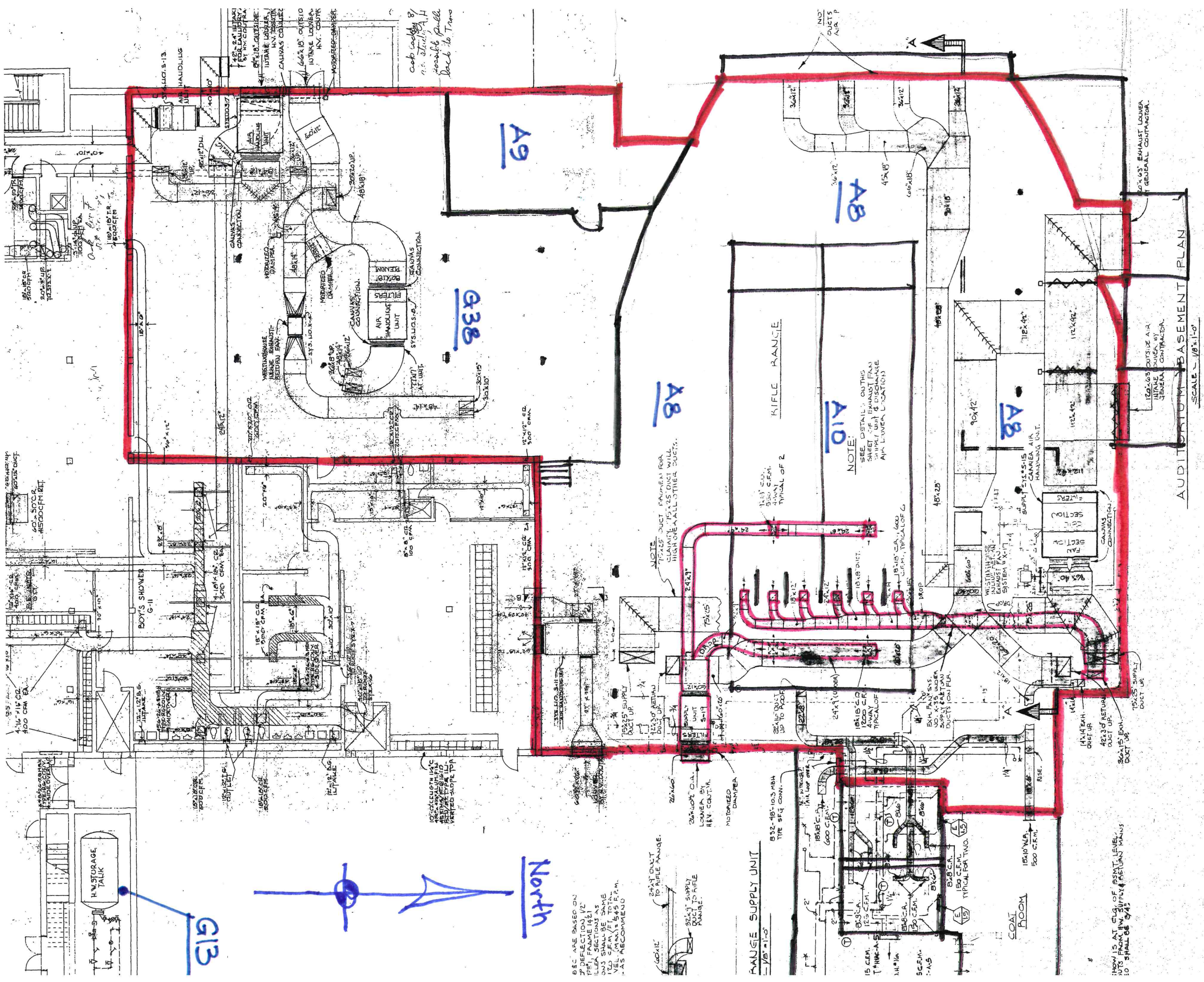
February 22, 2019

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ATTACHMENTS:

- 1) **Sketch AD-HM-01:** Existing Ductwork in Lead Clean-Up Area
- 2) **Specification Section 028320:** Lead Dust Reduction

END OF ANTINOZZI ASSOCIATES ADDENDUM #1



SCALE - 1/8" = 1'-0"

AUDITORIUM BASEMENT PLAN

SHOW IS AT CLG. OF ASMT. LEVEL. UNITS FROM RM. SUPPLY & RETURN MAINS SHALL BE 94"

COAT ROOM

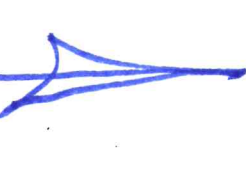
NOTE:
SEE DETAIL ON THIS SHEET OF EXHAUST FAN SUPPLY UNIT & DISCHARGE AIR LOWER LOCATION

RIFLE RANGE

RANGE SUPPLY UNIT
- 1/8" = 1'-0"

68" ARE BASED ON 2" DEFLECTION 1/2" PER FRAME 1421 LEA SECTIONS AS UNITS SHALL BE SAME 120 CFM. TOTAL LEA AS RECOMMEND

North



10" COLLECTOR IN C. ASSEMBLY TYPE 10. VERTICAL SLOPE 1:4

cap catch by 1/2" steel pipe. should pull back to Tano

New London High School
Phase 2: Early Habz-Mat Package
Addendum #1
Existing Ductwork in Lead Clean-Up Area
AD-HM-O1
02/22/79

Info from original blueprints of school
1/6" = 1'-0" on 11x17
0' 8' 16" 32'

G13

SECTION 028320 – LEAD DUST REDUCTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. General Provisions of Contract, including General Supplementary Conditions shall apply to this Section.
- B. Fuss & O’Neill Lead in Dust Determination Reports dated May 7, 2018, May 23, 2018 and June 27, 2018
- C. Section 028100 – Transportation & Disposal of Hazardous Materials
- D. Section 028213 - Asbestos Abatement
- E. Section 028319 – Lead Paint Awareness
- F. Hazardous Materials Abatement Drawings HM-001, HM-002, HM-003, NLHS-06.28.18

1.2 CONSULTANT

- A. The Owner and/or Architect shall retain a Consultant for the purposes of project management and monitoring during Lead Reduction activities. At the discretion of the Owner and/or Architect, the Consultant will represent the Owner and/or Architect during the reduction project. The Lead Abatement Contractor (the “Contractor”) will regard the Consultant's direction as authoritative and binding as provided herein, in matters particularly, but not limited to the following:
 - 1. Approval of work areas
 - 2. Review of monitoring results
 - 3. Completion of the various segments of work
 - 4. Final completion of the reduction
 - 5. Submission of data
 - 6. Daily field punch list items
- B. The State of Connecticut-licensed Asbestos Consultant – Lead Planner/Project Designer for this project is Carlos Texidor (License No. 002122).

1.3 ADDITIONAL GENERAL REQUIREMENTS

- A. The Contractor shall employ a competent CTDPH-licensed Lead Abatement Supervisor with at least (3) three years of experience on projects of similar scope and magnitude who shall be responsible for all work involving lead dust reduction as described in the specifications and defined in applicable regulations, and have full-time daily supervision of the same. The

Supervisor shall be the competent person as defined by Occupational Safety and Health Administration (OSHA) regulations.

- B. If required by federal, state, local, and any other authorities having jurisdiction over such work, the Contractor shall allow the work of this contract to be inspected. The Contractor shall immediately notify the Owner and Consultant and shall maintain written evidence of such inspection for review by the Owner and Consultant.
- C. The Contractor shall incur the cost of all fines resulting from regulatory non-compliance as issued by federal, state, and local agencies. The Contractor shall incur the cost of all work requirements mandated by federal, state, and local agencies as a result of regulatory non-compliance or negligence. The Contractor shall incur all the cost for all re-sampling of any post-reduction lead dust sampling as a result of inadequate cleaning or cross contamination.
- D. The Contractor shall immediately notify the Owner, and Consultant of the delivery Contractor shall immediately notify the Owner, and Consultant of the delivery of all permits, licenses, certificates of inspection, of approval, or occupancy, etc., and any other such instruments required under codes by authorities having jurisdiction, regardless of who issued, and shall cause them to be displayed to the Owner, and Consultant for verification and recording

1.4 SUMMARY OF WORK

- A. Work of this Section includes requirements for worker protection and waste disposal related to lead in dust contamination in the former rifle range and adjacent areas (the “Work” at the New London High School-490 Jefferson Avenue, Connecticut (the “Site”).
- B. The base bid includes the removal, packaging, transporting, and disposing of all lead contaminated materials and items as identified herein conducted by workers meeting the requirements of OSHA Lead in Construction Title 29 CFR, Part 1926.62. This shall include all necessary selective demolition to access or remove the lead in dust contaminated materials and items.
- C. The base bid includes the following Lead contaminated materials:

BASE BID – LEAD DUST CONTAMINATED MATERIALS

LOCATION	MATERIAL TYPE	ESTIMATED QUANTITY	NOTES
New London High School-Former Rifle Range			
Former Rifle Range-A10	Concrete Floor (includes sand-pit floors and stairs)	~2,700 SF	1, 4
Former Rifle Range-A10	Concrete Ceiling	~2,700 SF	1, 7
Former Rifle Range-A10	CMU Block Wall and Concrete Curb(s)/knee walls	~3,300 SF	1, 3
Former Rifle Range-A10	Metal Deflector Panel(s)	All plates, including metal-back stops	1, 2
Former Rifle Range-A10	HVAC Duct Work System (Supply duct work, exhaust duct work, supply air unit, exhaust fan, and louver) pin adhesive contains asbestos refer	~225 LF	1, 6

LOCATION	MATERIAL TYPE	ESTIMATED QUANTITY	NOTES
	to Section 02 82 13		
Former Rifle Range-A10	Sand Pits	~20 CY	1, 10
Former Rifle Range-A10	Movable Objects (including but not limited to: chairs, file cabinets clothing, books, desks, equipment, etc.)	ALL	1, 11
Former Rifle Range	Acoustical Ceiling/Wall Tiles	~600 SF	1, 9
Unassigned/Storage Space outside of the Former Rifle Range-South Section-A8	Concrete Floor (Walls and Ceilings note 7 applies)	~9,900 SF	1, 4, 7
Unassigned/Storage Space outside of the Former Rifle Range-North Side-Storage Area- G38	Concrete Floor (Walls and Ceilings note 7 applies)	~11,980 SF	1, 5, 7
Unassigned/Storage Space outside of the Former Rifle Range-Crawl Space-A8	Concrete Floor, Walls and Ceilings (Walls and Ceilings note 7 applies)	~6,500 SF	1, 4, 7
Unassigned/Storage Space outside of the Former Rifle Range-North Side-A8	Movable Objects (including but not limited to: chairs, file cabinets clothing, books, desks, equipment, etc.)	ALL	1, 11
Switch Gear Room (A-9)	Concrete Floor (Walls and Ceilings note 7 applies)	~2,500 SF	1, 4, 7
Unassigned/Storage Space outside of the Former Rifle Range-South Section-A8, A9, A10, G-38	Fiberglass Duct Insulation (Dispose of as Lead RCRA Hazardous Waste)	ALL	1

Notes:

- Quantities shall be verified by Contractor during the time of the walk-through. Discrepancies of amounts and/or locations of asbestos-containing materials shall be addressed prior to bidding the work to the Owner and Consultant.
- Metals deflectors plates can be recycled once removed.
- Contractor shall remove all of the CMU walls and all knee walls in it's entirely for disposal as RCRA Hazards Waste.
- Contractor shall use a concrete floor grinder, or a concrete scarifier with HEPA filter dust collecting device attachment to remove material(s) on the surface (Lead Dust). Contractor shall use a concrete grinder or scarify concrete floor in it's entirely a minimum of six (6) passes. All accumulated waste shall be disposed of as RCRA Hazardous Materials.
- Contractor shall use a concrete floor grinder with a HEPA dust collecting device attachment or Blastrac machine to remove material on the surface. Contractor shall use a concrete grinder or scarify concrete floor in it's entirely a minimum of four (4) passes.
- Contractor shall remove in its entirely all of the HVAC duct systems as indicated in NLHS drawing dated 06-28-2018 Items 3, 4, 5, 6 and 7. The contractors shall dispose of any fiberglass insulation as Lead RCRA Hazardous Waste,

7. Contractor shall clean all identified ceiling surfaces by wiping with cloths wet with trisodium phosphate (TSP) solution and be cleaned with a HEPA vacuum in conjunction with wet-wiping methods.
 8. NOT USED
 9. Contractor shall remove all acoustical ceiling/wall 12"x12" tiles and dispose of as Lead RCRA Hazardous Waste. Glue daubs associated with tiles contains two (2) percent Chrysotile asbestos. **(Refer to Section 028213 Asbestos Abatement)**
 10. Contractor shall remove all sand in the sand pit and dispose of sand as Lead RCRA Hazardous Materials. After the sand is removed from the sand pits, the contractor shall use a concrete scarifier with HEPA dust collecting device attachment to remove material on the surface (Lead Dust).
 11. Contractor shall separate all non-porous items for proper decontamination using wet-wiping and HEPA vacuuming methods, items can then be disposed of as non-hazardous materials. After being cleaned, non-porous items such as new furniture, new art stools, and athletic equipment shall be turned over to the Owner to be saved elsewhere in the building. All other porous items movable objects/items (not limited to paper, uniforms, books, etc.) will be disposed of as Lead RCRA Hazardous Materials.
- D. The procedures referenced herein shall be utilized during required lead reduction work specified for the former firing range and adjacent area's located beneath the auditorium. The following areas are impacted with high levels of Lead-in in dust:
1. Former Firing Range; Floors, Ceilings, CMU walls, Concrete floors
 2. Unassigned space adjacent/and outside of the former firing range;
- E. The repair/replacement work impacting lead contaminated materials may result in dust and debris exposing workers to levels of lead above the Occupational Safety and Health Administration's (OSHA) Action Level. Worker protection, training, and engineering controls referenced herein shall be strictly followed, until completion of exposure assessment with results indicating exposures below the "Action Level". **This Section does not involve lead abatement, but identified worker protection requirements for trades involved in the demolition and disposal procedures if lead is involved in the demolition waste stream.**
- F. Construction activities disturbing surfaces with lead-containing materials 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). All work specified in the technical sections of the Contract Documents shall also be in conformance with this Technical specification section 028320 for Lead Paint Awareness.

1.5 DEFINITIONS

- A. The following definitions relative to LBP shall apply:
1. Action Level (AL) - The allowable employee exposure, without regard to use of respiratory protection, to an airborne concentration of lead over an eight-hour time-weighted average (TWA) as defined by OSHA. The current action level is thirty micrograms per cubic meter of air (30 µg/m³).

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. CDC - The Center for Disease Control
5. Change Room - An area provided with separate facilities for clean protective work clothing and equipment and for street clothes, which prevents cross-contamination.
6. Component 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.
7. Consultant - Fuss & O'Neill Inc.
8. EPA - United States Environmental Protection Agency
9. Exposure Assessment - An assessment conducted by an employer to determine if any employee may be exposed to lead at or above the action level.
10. 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.
11. HUD - United States Housing and Urban Development
12. Lead - Refers to metallic lead, inorganic lead compounds, and organic lead soaps. Excluded from this definition are other organic lead compounds.
13. 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.
14. Lead Paint - Refers to paints, glazes, and other surface coverings containing a toxic level of lead.
15. MSHA - Mine Safety and Health Administration
16. NARI - National Association of The Remodeling Industry
17. NIOSH - National Institute of Occupational Safety and Health
18. OSHA - Occupational Safety and Health Administration
19. Owner - An employee or executive who has the principle responsibility for a process, program, or project.
20. Permissible Exposure Limit (PEL) - The maximum allowable limit of exposure to an airborne concentration of lead over an eight (8)-hour TWA, as defined by OSHA. The current PEL is fifty micrograms per cubic meter of air (50 $\mu\text{g}/\text{m}^3$). Extended workdays lower the PEL by the formula: PEL equals 400 divided by the number of hours of work.
21. 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 OSHA Title 29 CFR, Parts 1910.1025 and 1926.62. Samples shall be representative of the employee's work tasks. Breathing zone shall be considered an area within a sphere with a radius of 18-inches and centered at the nose or mouth of an employee.
22. Resource Conservation and 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 in paints, excluding selenium and silver.
23. SDS - Safety Data Sheets
24. TWA - Time Weighted Average
25. 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 milligram per square centimeter (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)

26. Toxicity Characteristic Leaching Procedure (TCLP) - The United States Environmental Protection Agency (EPA) required sample preparation and analysis for determining the hazard characteristics of a waste material.

1.6 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)
 - a. ANSI 288.2 - 1980 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 1910.1200 - Hazard Communication
 - d. Title 29 CFR, Part 1926.55 - Gases, Vapors, Fumes, Dusts, and Mists
 - e. Title 29 CFR, Part 1926.57 - Ventilation
 - f. Title 29 CFR, Part 1926.59 - Hazard Communication in Construction
 - g. Title 29 CFR, Part 1926.62 - Lead in Construction Interim Final Rule
 - h. Title 40 CFR, Parts 124 and 270 - Hazardous Waste Permits
 - i. Title 40 CFR, Part 172 - Hazardous Materials Tables and Communication Regulations
 - j. Title 40 CFR, Part 178 - Shipping Container Specifications
 - k. Title 40 CFR, Part 260 - Hazardous Waste Management Systems: General
 - l. Title 40 CFR, Part 261 - Identification and Listing of Hazardous Waste
 - m. Title 40 CFR, Part 262 - Generators of Hazardous Waste
 - n. Title 40 CFR, Part 263 - Transporters of Hazardous Waste
 - o. Title 40 CFR, Part 264 - Owner and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
 - p. Title 40 CFR, Part 265 - Interim Statutes for Owner and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
 - q. Title 40 CFR, Part 268 - Lead Disposal Restrictions
 - r. Title 49 CFR, Parts 170 - 180
3. Underwriters Laboratories, Inc. (UL)
 - a. UL586 - 1990 High Efficiency Particulate Air Filter Units

1.7 QUALITY ASSURANCE

- A. Hazard Communication Program

1. The Contractor shall establish and implement a Hazard Communication Program as required by OSHA Title 29 CFR, Part 1926.59.

- B. Compliance Plan (Site-Specific)

1. The Contractor shall 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 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. Hazardous Waste Management

1. The Contractor shall establish a Hazardous Waste Management Plan, which shall comply with applicable regulations and address the following:
 - a. Identification of hazardous wastes
 - b. Estimated quantity of waste to be disposed
 - c. Names and qualifications of each subcontractor who will be transporting, storing, treating, and disposing of wastes
 - d. Disposal facility location and 24-hour point of contact
 - e. Establish EPA state hazardous waste and identification numbers if applicable
 - f. Names and qualifications (experience and training) of personnel who will be working on site with hazardous wastes.
 - g. List of waste handling equipment to be used in performing the work to include cleaning, volume reduction, if applicable, and transport equipment
 - h. Qualifications of laboratory to be utilized for TCLP sampling and analysis
 - i. Spill prevention, containment, and countermeasure plan (SPCC)
 - j. Work plan and schedule for waste containment, removal, treatment, and disposal

D. Medical Examinations

1. Before exposure to lead-contaminated dust, provide workers with a comprehensive medical examination as required by OSHA Title 29 CFR, Parts 1910.1025 and 1926.62.
2. The examination shall not be required if adequate records show that employees have been examined as required by OSHA Title 29 CFR, Part 1926.62 within the last year.
3. Medical examination shall include, at a minimum, approval to wear respiratory protection and biological monitoring.

E. Training

1. The Contractor shall ensure that workers are trained to perform lead paint disturbing activities and disposal operations prior to the start of work, in accordance with OSHA Title 29 CFR, Part 1926.62.

F. Respiratory Protection Program

1. The Contractor shall 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 six months thereafter, as required by OSHA Title 29 CFR, Part 1926.62.
2. The Contractor shall establish a Respiratory Protection Program in accordance with ANSI Z88.2, OSHA Title 29 CFR, Parts 1910.134 and 1926.62.

1.8 SUBMITTALS

- A. The Contractor shall submit the following to the Consultant in one complete package prior to the pre-construction meeting and at least 10 business days before the start of the Work:
1. Submit a schedule to the Owner and the Consultant, which defines a timetable for executing and completing the project, including work area preparations, removal, cleanup, and decontamination.
 2. Submit a current valid certificate of insurance.
 3. Submit the name and address of the hauling contractor and location of the landfill to be used. Also submit current valid operating permits and certificates of insurance for the transporter and landfill.
 4. Submit video documentation showing the existing building conditions prior to the start of work. The Contractor shall be responsible for all costs associated with damage to the building and its contents that are not shown on the video documentation.
 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.
 6. Submit copies of medical records for each employee to be used on the project, including results of biological monitoring and a notarized statement by the examining physician that such an examination occurred.
 7. Submit workers' valid training certificates.
 8. Submit record of successful respirator fit testing performed by a qualified individual within the previous six months, for each employee to be used on this project with the employee's name and social security number with each record.
 9. Submit the name and address of Contractor's blood lead testing lab, OSHA CDC listing, and certification in the State of Connecticut.
 10. Submit detailed product information on all materials and equipment proposed for demolition work on this project.
 11. Submit pertinent information regarding the qualifications of the Project Supervisor (competent person) for this project, as well as a list of past projects completed.
 12. Submit a chain-of-command for the project.
 13. Submit a site-specific Emergency Action Plan for the project.
 14. Submit a written site-specific written 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).
 15. No work on the Site will be allowed to begin until the Owner and the Consultant as listed herein accept the Pre-Construction Submittals. Any delay caused by the Contractor's refusal or inability to submit this documentation accurately, completely, and in a timely manner does not constitute a cause for change order or a time extension;
- B. The following shall be submitted to the Consultant during the Work:

1. Results of personal Lead air sampling
2. Training and medical records for new employees to start Site work (24-hours in advance)

C. The following shall be submitted to the Consultant at the completion of the Work:

1. Copies of all air sampling results
2. Contractor logs
3. Copies of manifests and receipts acknowledging disposal of all waste material from the project showing delivery date, quantity, and appropriate signature of landfill's authorized representative.

1.9 PERSONAL PROTECTION

A. Exposure Assessment

1. The Contractor shall determine if any worker will be exposed to lead at or above the action level.
2. The exposure assessment shall identify the level of exposure a worker would be subjected to without respiratory protection.
3. The exposure assessment shall be achieved by obtaining personal air monitoring samples representative of a full shift at least (8-hour TWA).
4. During the period of the exposure assessment, the Contractor shall institute the following procedures for protection of workers:
 - a. Protective clothing shall be utilized
 - b. Respiratory protection
 - c. Change areas shall be provided
 - d. Hand washing facilities and shower
 - e. Biological monitoring
 - f. Training of workers

B. Respiratory Protection

1. The Contractor shall furnish appropriate respirators approved by NIOSH/MSHA for use in atmospheres containing lead dust.
2. Respirators shall comply with the requirements of OSHA Title 29 CFR, Part 1926.62.
3. Workers shall be instructed in all aspects of respiratory protection.
4. The Contractor shall have an adequate supply of HEPA filter elements and spare parts on-site for all types of respirators in use.
5. The following minimum respirator protection for use during paint removal or demolition of components and surfaces with lead paint shall be the half-face air purifying respirator with a minimum of dual P100 filter cartridges for exposures (not in excess of 500 $\mu\text{g}/\text{m}^3$ or 10 x PEL).

C. Protective Clothing

1. Personal protective clothing shall be provided for all workers, supervisors, and authorized visitors entering the work area.

2. Each worker shall be provided daily with a minimum of two complete disposable coverall suits.
3. Removal workers shall not be limited to two (2) coveralls, and the Contractor shall supply additional coveralls as necessary.
4. Under no circumstances shall anyone entering the abatement area be allowed to re-use a contaminated disposable suit.
5. Disposable suits (TYVEK™ or equivalent), and other personal protective equipment (PPE) shall be donned prior to entering a lead control area. A change room shall be provided for workers to don suits and other PPE with separate areas to store street clothes and personal belongings.
6. Eye protection for personnel engaged in lead operations shall be furnished when the use of a full-face respirator is not required.
7. Goggles with side shields shall 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.

1.10 PERSONAL MONITORING

A. General.

1. The Contractor shall be required to perform the personal air sampling activities during lead paint disturbing work. The results of such air sampling shall be posted, provided to individual workers and submitted to the Client as described herein.

B. Air Sampling.

1. Air samples shall be collected for the duration of the work shift or for 8-hours, whichever is less. Personal air samples need not be collected every day after the first day, if working conditions remain unchanged, but must be collected each time there is a change in removal operations, either in terms of the location or in the type of work. Sampling will be used to determine 8-hour TWA. The Contractor shall be responsible for personal air sampling as outlined in OSHA Title 29 CFR, Parts 1910.1025 & 1926.62.
2. Air sampling results shall be reported to individual workers in written form no more than 48-hours after the completion of a sampling cycle. The reporting document shall list each sample's result, sampling time and date, personnel monitored and their social security numbers, flow rate, sample duration, sample yield, cassette size, and analysts' name and company, and shall include an interpretation of the results. Air sample analysis results will be reported in $\mu\text{g}/\text{m}^3$.

C. Testing Laboratory.

1. The Contractor's testing lab shall be currently participating in AIHA's Environmental Lead Laboratory Accreditation Program (ELLAP). The Contractor shall 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.

1.11 CLEARANCE SAMPLING

1. The consultant will conduct a visual assessment of the clearance area to determine if there is any visible settled dust or related debris in the interior of the work spaces.
2. The consultant will conduct dust sampling after the clearance area has passed visual assessment of all floors, walls, ceilings, vertical and horizontal surfaces.
3. All dust samples must meet the Federal and State dust lead clearance levels (by wipe sampling) of 40 ug/ft².

PART 2 - PRODUCTS

2.1 GENERAL

- A. Any substitution in materials, equipment, or methods to those specified shall be approved by the Owner, Owner, and Consultant prior to use. Any requests for substitution shall be provided in writing to the Owner, Owner, and Consultant. The request shall clearly state the rationale for the substitution.
- B. Submit to the Owner, Owner, and Consultant product data of all materials and equipment and samples of all materials to be considered as an alternate.
- C. Product data shall consist of manufacturer; catalog sheets, brochures, diagrams, schedules, performance charts, illustrations, SDS, and other standard descriptive data. Submittal data shall be clearly marked to identify pertinent materials, products or equipment and show performance characteristics and capacities.
- D. Samples shall be of sufficient size and quantity to clearly illustrate the functional characteristics of the product or material with integrally related parts and attachment devices.

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 shall not be used and shall be removed from the premises.
- C. The Contractor shall have available sufficient inventory or dated purchase orders for materials necessary for the project including protective clothing, respirators, filter cartridges, polyethylene (poly) sheeting of proper size and thickness, tape, and air filters.
- D. Materials

1. Poly sheeting in a roll size to minimize the frequency of joints shall be delivered to the Site with factory label indicating 6-mil.
2. Poly disposable bags shall be 6-mil. Tie wraps for bags shall be plastic, five-inches long (minimum), pointed and looped to secure filled plastic bags.
3. Tape or spray adhesive will be capable of sealing joints in adjacent poly sheets and for attachment of poly sheeting to finished or unfinished surfaces of dissimilar materials and capable of adhering onto 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 shall be labeled in accordance with EPA and DOT standards.
5. HEPA-filtered exhaust systems shall be used during powered dust-generating abatement operations. The use of powered equipment without HEPA exhausts on this Site shall be prohibited.

2.3 TOOLS AND EQUIPMENT

- A. Provide suitable tools for all lead disturbing operations.
- B. The Contractor shall have available power cables or sources such as generators (where required).
- C. Vacuum units, of suitable size and capacities for the project, shall have HEPA filter(s) capable of trap-ping and retaining 99.97% of all mono-dispersed particles of 0.3 micrometers in diameter. HEPA filtered negative air machines shall also be used in areas of lead in dust removal.

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 Subcontractors. The assigned Contractor Site Supervisor must attend this meeting.
- B. The Contractor shall present a detailed project schedule and project submittal package at the Pre-Construction Meeting. Variations, amendments, and corrections to the presented schedule will be discussed, and the Owner and Consultant will inform the Contractor of any scheduling adjustments for this project.
- C. Following the Pre-Construction Meeting, the Contractor shall submit a revised schedule (if needed) no later than one week after the meeting.

3.2 WORKER PROTECTION/TRAINING

- A. The Contractor shall provide appropriate training, respiratory and other PPE, 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 completed one of the following training courses:
 - 1. EPA Lead Abatement Supervisor (40-hours)
 - 2. EPA Lead Abatement Worker (32-hours)

3.3 CONTRACTOR'S RESPONSIBILITIES

- A. The Contractor shall be responsible for establishing and maintaining controls referenced herein to prevent dispersal of lead contamination from the lead work area.
- B. The Contractor shall also be responsible for conducting work with applicable federal, state, and local regulations as referenced herein.
- C. **The Contractor shall also be responsible for all additional cost associated with post verification dust sampling to meet the clearance criteria of 40 micrograms per square foot ($\mu\text{g}/\text{ft}^2$) on floors, walls, ceilings and all vertical and horizontal surfaces of lead in dust on all surfaces that have been cleaned.**
- D. The Contractor shall install a clear viewing pane that looks directly into regulated work areas.

3.4 WORKER HYGIENE PRACTICES *(Required during initial exposure assessment and if results of air sampling are above OSHA Action Level)*

- A. Work Area Entry.
 - 1. Workers shall don PPE prior to entering work area, including respiratory protection, disposable coveralls, gloves, headgear, and footwear.
- B. Work Area Departure.
 - 1. While leaving respirators on, workers shall 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.
 - 1. All workers must wash their hands and faces upon leaving the work area.
- D. Equipment.
 - 1. All equipment used by workers inside the work area shall be wet-wiped or bagged for later decontamination before removal from the work area.

- E. Prohibited Activities.
 - 1. Under no circumstances shall workers eat, drink, smoke, chew gum or tobacco, apply cosmetics, or remove their respirators in the work area.
- F. Shock Hazards.
 - 1. The Contractor shall be responsible for using safe procedures to avoid electrical hazards. All temporary electrical wiring will be protected by ground fault circuit interrupters (GFCI).

3.5 LEAD WORK AREA *(Required during initial exposure assessment and if results of air sampling are above OSHA Action Level)*

- A. The Contractor shall place lead warning signs at all entrances and exits from the work area. Signage shall be a minimum of 20" x 14" and shall state the following:

**DANGER
LEAD WORK AREA
MAY DAMAGE FERTILITY OR THE UNBORN CHILD
CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM
DO NOT EAT, DRINK OR SMOKE IN THIS AREA**

- B. The Contractor shall designate a change room as specified in this Section. The change room shall consist of two layers of 6-mil thickness poly sheeting on the floor surface adjacent to the lead work area. The change room shall have separate storage facilities for street clothes to avoid cross-contamination.
- C. The Contractor shall provide potable water for hand and face washing and provide a portable shower unit.
- D. The Contractor shall place 6- mil poly drop cloths on floor/ground surfaces prior to beginning removal work to facilitate clean-up.

3.6 WORK AREA CLEAN-UP

- A. The Contractor shall remove all loose chips and debris from floor surfaces and place in hazardous waste disposal bags.
- B. The Contractor shall clean using a HEPA-filter equipped vacuum the adjacent surfaces to remove dust and debris.
- C. Poly drop cloths shall be cleaned and properly disposed of general construction and demolition waste.

3.7 WASTE DISPOSAL

- A. The Contractor's contractual liability shall be the proper disposal of all hazardous wastes generated at the Site in accordance with all applicable federal, state, and local regulations as referenced herein. The Hazardous material contractor shall manifest the hazardous waste for shipment to a hazardous waste treatment, storage, disposal, or recycling facility (40 CFR 262.20 - 262.23, 262.42)

3.8 CONSULTANT

- A. The Owner may retain a Consultant for the purpose of construction administration and project monitoring during demolition work at the Site.
- B. The Consultant will represent the Owner in all tasks of the project at the discretion of the Owner.

3.9 CONSULTANT'S RESPONSIBILITIES

- A. The Consultant may conduct air sampling to ascertain the integrity of controls that protect the environmental from possible lead contamination. Independently, the Contractor shall monitor air quality within the work area to ascertain the protection of employees and to comply with OSHA regulations.
- B. The Consultant's project monitor may collect and analyze air samples during the following period:
 - 1. Demolition Period. If required, the Consultant's project monitor shall collect air samples on a daily basis during the work period. A sufficient number of area air samples shall be collected outside of the work area, to evaluate the degree of cleanliness or contamination of the environment during removal. Additional air samples may be collected inside the work area and decontamination system, at the discretion of the project monitor.
- C. If the project monitor determines that the building air quality has become contaminated from the project, they shall immediately inform the Contractor to cease all demolition operations and implement a work stoppage clean-up procedure. The Contractor shall conduct a thorough clean-up of the areas designated by the Consultant. No further removal work may occur until the Consultant has assessed that the air has been decontaminated.
- D. Pre-abatement and abatement air samples shall be collected as required to obtain a volume of 600 liters of air. Air samples shall be analyzed by NIOSH Method 7300 sampling protocol.

3.10 CONSULTANT'S INSPECTION RESPONSIBILITIES

- A. Consultant may conduct inspections throughout the progress of the demolition project. Inspections shall be conducted to document the progress of the work, as well as the procedures and practices employed by the Contractor.

- B. The Consultant shall perform the following inspections during the course of abatement activities:
1. Pre-commencement Inspection. Pre-commencement inspections shall be performed at the time requested by the Contractor. The Consultant shall be informed a minimum of 12-hours prior to the time the inspection is required. If deficiencies are identified during the pre-commencement inspection, the Contractor shall perform the necessary adjustments to obtain compliance.
 2. Work Area Inspections. Work area inspections shall be conducted on a daily basis at the discretion of the Consultant. During the work inspections, the Consultant will observe the Contractor's removal methods and procedures, assess project progress, and inform the Contractor of specific remedial activities if deficiencies are noted. Lead in dust clearance dust samples will be collected after a visual assessment has been completed in the specific work areas. The turnaround time for results is three to five days.

END OF SECTION 028320

New London High School Phase 2 Early Hazmat Package
Pre-Bid Meeting Agenda
Tuesday, February 19, 2019

1. Sign in.
2. Project Description- Decommissioning of the existing firing range, lead dust clean-up in adjacent areas. Select hazardous materials abatement including floor tile and mastic, expansion joints, thermal insulation, boiler abatement and boiler demolition.
3. Project award date and construction schedule- Award: Late March, 2019. Firing Range decommissioning and lead clean-up: April, 2019. Abatement and Boiler Demo: Summer, 2019. The High School Building will not be occupied during abatement activities.
4. All bids for the bid packages listed below are due by 2:00 PM (Tuesday February 26, 2019) at the office of The City of New London Purchasing Agent, 13 Masonic St., New London, CT 06320. All bids will be opened and read aloud.
 - 2.1 Abatement
5. DAS Requirements- A current Department of Administrative Services Prequalification Certificate and Update Statement must be submitted with the bid.
6. This project is being performed under a Project Labor Agreement (PLA). Awarded Bidders must execute the "Contractor's Acceptance of Agreement" regarding the PLA.
7. Bonds- For all bidders a 10% Bid Bond or Bid Security payable to Newfield + Downes is required at the time of bid submission and 100% Performance and Payment Bonds are required upon award.
8. **Bid Forms- Bid submissions via fax or in electronic format will not be accepted. Submit one original and two copies of the following:**
 - a. Fully Executed Bid Proposal Form. – See Section 00 4100. Mark the bid package number and title on the outside of the sealed envelope. In the lower left corner of the envelope mark "Sealed Bid No.: 2019-15" and "Not to be opened until February 26, 2019 at 2:00PM (or insert revised Bid Date and Time)
 - b. Bid Bond or Bid Security (10%) - see Section 00 6100
 - c. Notification to Bidders/Contract Compliance Monitoring Report- see Section 00 3135
 - d. Contractors Qualification Statement (AIA A 305)- see Document 00 5900

- e. NCCI Form showing the most current Workers Compensation Experience Modification Factor (EMR)
 - f. Current DAS Pre-qualification Certificate and Update Statement
 - g. Letter form Surety confirming bonding capacity.
 - h. Affirmative Action Policy Statement- See Section 00 3136
 - i. Anti-fracking Provision- See Section 00 3136
 - f. Certification of Bidder Regarding Equal Employment Opportunity- See Section 00 3136
 - g. Certification of Non-Segregated Facilities- See Section 00 3136
9. Hard copies of Bid documents can be purchased for the cost of printing plus handling, shipping and sales tax at ARC Farmington, 17 Talcott Notch Rd., Farmington CT 06032 (planwell.farmingtonct@e-arc.com). Please call (860) 677-8817 to pre-order. Allow 24-48 hours for order processing. Documents can be downloaded free of charge from Newfield + Downes Fileshare Site. Contact David Girardini, (860) 509-3022 (davidgirardini@newfieldconstruction.com) for downloading instructions.
10. Contract format- Newfield + Downes is a Construction Manager at Risk. Contracts will be held by Newfield + Downes. Refer to Section 00 5200 for the Form of Agreement between the Construction Manager and Trade Contractor.
11. This is a prevailing wage project for all bidders. The higher wage rate from the Project Labor Agreement or the Prevailing Wage Rate shall apply. Certified payrolls are to be submitted weekly.
13. Taxes- This Project exempt from Federal Excise Taxes as well as State of Connecticut Sales Tax to the extent allowed by law. All out of state (non-resident) contractors must furnish Newfield + Downes with a Certificate of Compliance with Connecticut General Statutes Section 12-430(7) (Guarantee Bonds for Unemployment Compensation and Sales & Use Taxes) from the Connecticut Department of Revenue Services.
14. Bidder requirements- Prior experience of no less than 3 similar size projects. Workers Compensation EMR 1.0 or less, including all tiers of subcontractors. All bidders must submit a Contractors Qualification Statement AIA A305 with bid.
15. Permits- The General Building Permit will be secured by the Construction Manager. All other permits shall be obtained by the applicable licensed trades. The City of New London portion of the permit fees will be waived. All licensed contractors and subcontractors shall include the State Public Education Fund permit fees (\$.26/\$1,000) in their bid.

16. Send all pre bid inquiries to Newfield + Downes. Email to David Girardini at Newfield + Downes. (davidgirardini@newfieldconstruction.com). **The cut off for pre bid inquiries is the end of the day on Thursday, February 21st.**
17. Contractors are required to meet the requirements of the City of New London Responsible Contractor Ordinance
 - Show proof of participation in a State Certified Apprenticeship Program prior to award.
 - Apprentices- 10% of workforce by trade, 50% of which shall be first year apprentices.
18. This Project is subject to the City of New London employment preference goal that construction jobs be offered to local residents.
 - Good Faith Effort to employ a workforce comprised of 25% local residents of New London County with residents of the City of New London getting a priority representing 50% of said participation which will include 25% female and minority workers
19. Additional pre bid inspections are not scheduled but can be requested by contacting David Girardini at Newfield + Downes.
20. Questions.
21. Tour of the work areas.

