

**DIVISION
OF
ENVIRONMENTAL COMPLIANCE**

**ON-CALL ASBESTOS, LEAD, AIR QUALITY AND
STRUCTURE DEMOLITION COMPLIANCE
SCOPES**

2004

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TASK 710 – INVESTIGATIVE SURVEY
A – ASBESTOS CONTAINING MATERIALS

OBJECTIVE:

The objective of a Task 710A is to conduct a visual inspection and collect and review bulk sample data in order to identify the presence and types, assess the condition, and quantify the amount of asbestos containing materials located at a building site.

TASK SCOPE:

Preliminary Site Review

The Consultant shall review the following data provided by ConnDOT:

- Name of building
- Address of property
- Contact names and phone numbers
- Number of buildings
- Age of buildings
- Size of buildings
- Number of floors
- Site layout
- Method of building access
- Building status relative to occupancy, renovation or demolition
- Description of activity to occur at the site (e.g. demolition, reconstruction, occupancy, leasing/sale, etc.)
- Site information regarding oil tanks, septic/sewer, well/city water, natural gas, etc.
- Site information regarding status of public utilities

The Consultant shall schedule field inspection activities with ConnDOT and building occupants.

The Consultant shall determine the sites historical significance with the CT Historical Commission State Historic Preservation Office (SHPO) should the property be >50 years old and scheduled for demolition.

Site Inspection and Sampling

The Consultant, utilizing CTDPH certified asbestos inspectors, shall conduct an investigative survey for asbestos-containing material (ACM) according to the Asbestos Hazard Emergency Response Act (AHERA) sampling protocol. After studying the preliminary site review data, the inspector(s) shall physically walk through the facility, reviewing the building from the basement to the top floor, checking all spaces within the building including, but not limited to, all floors, walls, ceilings, air plenums, ventilation ducts, electrical rooms, boiler rooms, crawlspaces and pipe chases as well as the exterior of the building including the roof, siding and buried materials.

Bulk samples shall be collected by the Consultant that are representative of each of the suspect materials identified during the walk through in accordance with AHERA sampling protocol. Suspect materials include, but are not limited to, boiler and tank insulation, boiler breeching, pipe insulation, mudded pipe fitting insulation, plaster (base & skim coats), wallboard/joint compound, ceiling tile, floor covering, window glazing/caulking, mastics, base cove, fireproofing, fire doors, siding and roofing materials. Generally, these samples shall be collected in locations that reduce the potential for exposure to building occupants and shall follow procedures that would prevent the emission of asbestos fibers into the air.

The Consultant shall submit the collected samples to a laboratory accredited by the CTDPH and NVLAP for analysis for asbestos content. Analytical services shall be secured by the Consultant from laboratories providing competitive pricing.

Laboratory analysis shall be performed on all samples using polarized light microscopy (PLM) with visual area estimate (vae) quantification. Multi-layered materials such as plaster, sheetrock/joint compound, floor tile/mastic, etc. shall be analyzed separately. Plaster layers, sheetrock/joint compounds and similar materials with asbestos detected in quantities less than 5% using visual area estimate (vae) techniques, shall be further quantified via point counting (pc) techniques to obtain a more accurate quantification of asbestos content. Gravimetric reduction (gr) preparation techniques shall be utilized on non-friable organically bound (NOB) samples as appropriate, with negative results on NOB samples confirmed through the use of transmission electron microscopy (TEM).

Should the Consultant note any other environmental concerns, (i.e. storage tanks, spills, lead based paint, PCB's, fluorescent lights, mercury thermostats, "household hazardous waste", mold, etc.), the Consultant shall notify ConnDOT of the presence of such concerns.

Report Preparation

Upon completion of the Site Inspection and Sampling, the Consultant shall prepare a report of their findings and conclusions. The report shall be prepared as described below.

TASK PRODUCTS:

At the conclusion of the inspection, the consultant shall prepare a documentation package that includes, but is not limited to:

- Project Outline Page with: Site Location, DOT Assignment #, DOT Project #, DOT Project Manager, Inspectors Names/License #, Dates of Survey, Notation of whether ACM was Identified, Cost Estimate for Abatement, Site Historic Significance, Additional Environmental Concerns noted
- Tables of Survey Results (samples, ACM, non-ACM)
- Site Photos
- Field Site Sketches indicating sampling locations and identified ACM
- Correspondence on Historical Status
- Inspector/Laboratory Licenses/Accreditations

- Sample chain of custody and laboratory analysis sheet
- Itemized cost estimate for abatement

BASIS OF PAYMENT:

A 710A assignment shall include all work required to prepare the report required under this Task and shall include but not necessarily be limited to effort required for the following:

- Project Management
- Meeting(s) with ConnDOT
- Review of existing information
- Field Investigation & Sampling
- Laboratory Analysis
- QA/QC
- Report Preparation

The base budget for this task shall depend upon the size of the structure to be investigated. The base budget shall be deemed to include all effort as described above for a project that involves a building structure encompassing up to 2,500 square feet. For each additional 2,500 square foot increment, a separate incremental budget shall be established to cover all costs associated with the additional effort. The total budget for a Task 710A assignment shall include the base budget plus the incremental budget times the number of additional 2,500 square foot increments included. This Basis of Payment shall apply for structures up to 10,000 square feet; for assignments on structures over 10,000 square feet the fees shall be negotiated separately.

TASK 720 – PROJECT DESIGN AND SPECIFICATION DEVELOPMENT
A – ASBESTOS CONTAINING MATERIALS

OBJECTIVE:

The objective of a Task 720A is to develop plans, specifications and cost estimates for asbestos abatement, either as stand alone documents or for inclusion in Contract Bid Documents.

TASK SCOPE:

Draft Abatement Review Plan

When abatement of ACM is required, the Consultant, utilizing a CTDPH certified asbestos project designer, shall prepare a preliminary design of the abatement project. The design document shall include, but not be limited to, the following:

- Description of work required
- ACM abatement procedures
- Regulatory references
- Contractor bid qualifications
- Contractor submittals
- Worker protection and decontamination procedures
- Exposure assessments
- Contractor/worker licensing, training and medical surveillance requirements
- Clearance criteria
- Waste transport and disposal requirements
- Alternative work practices (AWPs) (if applicable)
- Project designer certifications
- Sample results
- Field site sketches or CAD drawings

The design shall include a list of all applicable regulations and permits that shall be required for the project. The list shall include applicable State, Federal and Local regulations, and permits, with names, addresses and telephone numbers of regulation personnel. Typically the USEPA Region I, OSHA, State of Connecticut Department of Public Health (CTDPH) and State of Connecticut Department of Environmental Protection (CTDEP) regulations and notifications are to be followed. Additionally, local regulations and permits may be required including, but not limited to, building permits and notification to the Health and Fire Departments.

The consultant shall coordinate the design and set up project meetings as required with all interested parties to discuss preliminary design requirements and resolve all outstanding items regarding the project.

The format of the specifications shall be submitted in Construction Specifications Institute (CSI), Standard Specifications for Road Bridges and Incidental Construction 814A or 815, or as directed by the Engineer.

The package shall be submitted to ConnDOT for review and comments.

TASK PRODUCTS:

Final Design (100%)

Based on input from the review of the draft submittal design plan, a final abatement design package shall be prepared which includes the Technical Specifications and Engineering Drawings.

Prepare Cost Estimate and Schedule for Abatement

The Consultant shall also submit to ConnDOT a budget estimated cost for asbestos abatement as well as the estimated cost to provide project compliance and project surveillance during the asbestos abatement activities in a format prescribed by ConnDOT.

BASIS OF PAYMENT:

A 720A assignment shall include all work required to prepare the report required under this Task and shall include but not necessarily be limited to effort required for the following:

- Project Management
- Meeting(s) with ConnDOT
- Review of existing information
- QA/QC
- Report Preparation
- CADD

The base budget for this task shall depend upon the size of the structure involved. The base budget shall be deemed to include all effort as described above for a project that involves a building structure encompassing up to 2,500 square feet. For each additional 2,500 square foot increment, a separate incremental budget shall be established to cover all costs associated with the additional effort. The total budget for a Task 720A assignment shall include the base budget plus the incremental budget times the number of additional 2,500 square foot increments included. This Basis of Payment shall apply for structures up to 10,000 square feet; for assignments on structures over 10,000 square feet the fees shall be negotiated separately.

TASK 725 – OPERATIONS & MAINTENANCE (O&M) PLAN DEVELOPMENT
A – ASBESTOS CONTAINING MATERIALS

OBJECTIVE:

The objective of as Task 725A is to develop an operations and maintenance plan to allow for proper in-house management and hazard communication of asbestos containing materials to remain in a building.

TASK SCOPE:

Draft O&M Review Plan

When ACM is to remain in place, the Consultant, utilizing a CTDPH certified asbestos management planner, shall prepare a preliminary Operations and Maintenance Program to properly manage the ACM in place. Key provisions of the O&M Plan shall include, but not be limited to, the following:

- Introduction
- Site Description
- Hazard Communication: A program to inform workers, tenants, building occupants and contractors where ACM is located, and how and why to avoid disturbing the ACM.
- Surveillance: A schedule for periodic inspections of the ACM to record, assess, and document any changes in the condition of the ACM, provide recommended response actions, and collect additional samples of suspect materials as deemed necessary by the inspector
- Controls: A work control/permit system, including an asbestos coordinator, to control activities which might potentially disturb ACM.
- Work Practices: A program to implement O&M work practices to avoid or minimize fiber release during activities affecting ACM.
- Emergency Response: A program to provide emergency response procedures to responding to a fiber release episode.
- Worker Protection: A medical and respiratory protection program, as applicable.
- Training: A training program, which includes an asbestos coordinator, for the custodial and maintenance staff.

The package shall be submitted to ConnDOT for review and comments.

TASK PRODUCTS:

Final O&M Plan (100%)

Based on input from the review of the draft submittal O&M plan, a final O&M package shall be prepared.

BASIS OF PAYMENT:

A 725A assignment shall include all work required to prepare the report required under this Task and shall include but not necessarily be limited to effort required for the following:

- Project Management
- Meeting(s) with ConnDOT
- Review of existing information
- QA/QC
- Report Preparation
- CADD

The base budget for this task shall depend upon the size of the structure involved. The base budget shall be deemed to include all effort as described above for a project that involves a building structure encompassing up to 2,500 square feet. For each additional 2,500 square foot increment, a separate incremental budget shall be established to cover all costs associated with the additional effort. The total budget for a Task 725A assignment shall include the base budget plus the incremental budget times the number of additional 2,500 square foot increments included. This Basis of Payment shall apply for structures up to 10,000 square feet; for assignments on structures over 10,000 square feet the fees shall be negotiated separately.

TASK 726 – PERIODIC SURVEILLANCE
A – ASBESTOS CONTAINING MATERIALS

OBJECTIVE:

The objective of a Task 726A is to provide periodic on-site surveillance of asbestos containing materials under in-house management, assess the condition of materials, provide recommended response actions and update the existing O&M plan.

TASK SCOPE:

Site Inspection and Sampling

When ACM is to remain in place, the Consultant, utilizing a CTDPH certified asbestos inspector, shall perform a periodic inspection of these areas/materials identified in the O&M plan. This inspection shall include a visual survey of the condition of the identified areas/materials and documentation of the findings.

The Consultant shall also collect samples of additional suspect materials, as deemed necessary by the inspector, to determine asbestos content.

Report Preparation

Upon completion of the Site Inspection and Sampling, the Consultant shall prepare a report of their findings and conclusions. The report shall be prepared as described below.

TASK PRODUCTS:

The Consultant shall prepare a report for each periodic survey conducted which summarizes the findings, recommends response actions, summarizes changes required in the management plan and includes results of all new sampling.

The Consultant shall formally update the O&M plan as the results of periodic inspections dictate and/or after any abatement activities found to be necessary are completed, and reissue the updated O&M plan to ConnDOT and the affected building occupants.

BASIS OF PAYMENT:

A 726A assignment shall include all work required to prepare the report required under this Task and shall include but not necessarily be limited to effort required for the following:

- Project Management
- Meeting(s) with ConnDOT
- Review of existing information
- Field Investigation & Sampling
- Laboratory Analysis

- QA/QC
- Report Preparation

The base budget for this task shall depend upon the size of the structure involved. The base budget shall be deemed to include all effort as described above for a project that involves a building structure encompassing up to 2,500 square feet. For each additional 2,500 square foot increment, a separate incremental budget shall be established to cover all costs associated with the additional effort. The total budget for a Task 726A assignment shall include the base budget plus the incremental budget times the number of additional 2,500 square foot increments included. This Basis of Payment shall apply for structures up to 10,000 square feet; for assignments on structures over 10,000 square feet the fees shall be negotiated separately.

TASK 730 – PROJECT COMPLIANCE
A – ASBESTOS CONTAINING MATERIALS

OBJECTIVE:

The objective of a Task 730A is to provide project compliance administrative and technical services related to on-site asbestos abatement activities.

TASK SCOPE:

Prebid Meeting and Walkthrough

After completion of the design specification, the Consultant may solicit bids for the asbestos abatement, utilizing those Contractors awarded contracts under the CT DAS asbestos & lead abatement contract, or the Engineer may solicit competitive open bidding. The Consultant shall coordinate and attend the prebid meeting, explain the design specification and conduct a walkthrough. If bidders require information that cannot be clarified at the prebid meeting, Consultant shall develop an addendum which shall be sent to all bidders where applicable.

Contractor Qualification Review

The consultant shall review the abatement contractor's bid qualifications as identified in the specification.

Contractor Abatement Award

The consultant shall review the bids and make recommendations to ConnDOT. ConnDOT shall make the contract award.

Funding Requests

For projects where abatement is to be conducted by Contractors listed on the CT DAS asbestos & lead abatement contract, the Consultant shall submit to ConnDOT, funding requests for asbestos abatement as well as the project compliance and project surveillance required during the asbestos abatement activities in a format prescribed by ConnDOT. Requests for CT DAS Contractor funding shall be accompanied by a cost estimate supplied by the Contractor.

Review and Approval of Contractor Submittals

Prior to starting the asbestos abatement project, the Consultant shall review all materials submitted by the asbestos abatement contractor as required in the specification. The submittals shall include, but are not limited to:

- Notifications to EPA and/or CTDPH.
 - Any written request for a variance or alternative work practice from the CTDPH, OSHA or EPA standards.
 - All licenses, certifications, training, medical data and respiratory fit test data for each
- Task 730A – Project Compliance

- supervisor and worker as well as the company.
- Negative exposure assessment data.
- Plan, including schedule and manpower, for addressing the ACM abatement.

Laboratory Coordination

Assist in the selection of the laboratory and coordination for services. Review and recommend approval of laboratory invoices for payment. Evaluate and tabulate laboratory results and provide QA/QC on all laboratory involvement.

Technical Support of Field Personnel

Answer questions that arise in the field; interpret Contract Documents; resolve disputes between Owner/Contractor; provide support to field personnel.

Periodic Visits to the Site

Make visits to the work site to address critical work issues. All visits to the site will require documentation regarding the reasons/activities that occurred as part of the project monitors daily surveillance logs.

Invoice Review

The Consultant shall review contractor invoices for payment for concurrence with field records, contract rates, and backup documentation. The Consultant shall resolve any invoice discrepancies with the contractor and prepare and submit necessary ConnDOT payment forms to the Department's Project Engineer for further processing and payment.

Report Preparation

Upon completion of the project activity, the Consultant shall prepare compliance reports based on their oversight. The report shall be prepared as described below.

TASK PRODUCTS:

Letter of Compliance

After the conclusion of project activity, and the receipt of satisfactory clearance criteria results, the Consultant shall issue a letter of compliance to ConnDOT indicating the reasons asbestos abatement was undertaken, the Contractor who performed such services, and the date of completion.

Project Compliance Report

At the completion of the abatement project, the Consultant shall prepare a documentation package that shall provide ConnDOT with a complete set of records documenting all activities that took place at the site. This package shall be suitable for use by ConnDOT if future questions arise concerning ACM.

The completed documentation package shall include:

- Executive summary report of all activities.
- Daily site logs
- A project outline with Site Location, DOT Project #, DOT Assignment #, DOT Project Manager, Dates of project, Contractor name and license #, Consultant Project Monitor/Air Sample Analyst names and licenses/accreditations, lists of materials abated, amount of ACM waste generated, ACM waste hauler, ACM waste disposal facility, Locations of remaining asbestos
- Sample chain of custody sheets and laboratory results for air and bulk samples
- Notifications of asbestos abatement (EPA and CTDPH)
- Copies of Alternative Work Practices/Variations if applicable.
- Sign in Sheets
- Abatement contractor license
- Project Monitor certifications
- Laboratory accreditations
- Abatement contractor medical/training records.
- Contractor OSHA personal air sample results.
- Calibration records for testing equipment used
- Waste shipment records.
- All contractor submittals.
- Letter of compliance

BASIS OF PAYMENT:

A 730A assignment shall include all work required to provide administrative and technical support to the project and prepare the reports required under this Task and shall include but not necessarily be limited to effort required for the following:

- Project Management
- Meeting(s) with ConnDOT
- Coordination with field staff, Contractor and Laboratories
- Site Visits
- QA/QC
- Report Preparation

The base budget for this task shall depend upon the size of the structure involved. The base budget shall be deemed to include all effort as described above for a project that involves a building structure encompassing up to 2,500 square feet. For each additional 2,500 square foot increment, a separate incremental budget shall be established to cover all costs associated with the additional effort. The total budget for a Task 730A assignment shall include the base budget plus the incremental budget times the number of additional 2,500 square foot increments included. This Basis of Payment shall apply for structures up to 10,000 square feet; for assignments on structures over 10,000 square feet the fees shall be negotiated separately.

TASK 740 – PROJECT SURVEILLANCE
A – ASBESTOS CONTAINING MATERIALS

OBJECTIVE:

The objective of a Task 740A is to provide an on-site project monitor to support the Engineer to ensure Contractor compliance with the plans, specifications and regulations when performing asbestos abatement.

TASK SCOPE:

Field Project Management

Consultant shall be the liaison to ConnDOT regarding field activities, coordinating and scheduling with Contractor, laboratories, CTDPH, CTDEP, OSHA, EPA.

Consultant shall perform daily field coordination with and oversight of the on-site Project Monitor.

Air Monitoring, Site Inspections and Project Oversight

The Consultant shall assign a CTDPH certified asbestos project monitor to provide construction administration, air sampling and inspection services during the asbestos abatement project.

The Project Monitor shall provide daily inspections of the work area to ensure that the abatement contractor is conducting the removal in accordance with the project specification and all applicable regulations.

Daily project activities, as well as all observations made during the visual inspections shall be written down by the Project Monitor in a permanent log book kept at the site. The Project Monitor shall verify that a contractor maintains a daily sign in sheet where all personnel performing work in the regulated area shall be required to sign in and out.

In addition to the daily inspection services, the Project Monitor shall conduct daily perimeter air sampling on the outside of the containment barriers. The number of samples to be taken shall depend upon what abatement activities are taking place and the size of the project. The intent of the air sampling is to verify the effectiveness of the engineering controls and to detect possible contamination of non-work areas with airborne asbestos fibers. Additional area testing shall be conducted within the containment area in order to evaluate the fiber levels during the asbestos abatement work to ensure safe work practices.

Results of air sample analysis shall be recorded in the site log book. These results shall be compared to acceptable standards, based on current regulations and guidelines. (Samples taken within the containment enclosure shall be monitored to ascertain that the Contractor is making acceptable efforts (e.g., wetting) to keep the airborne concentrations of fiber and residue to a level appropriate to environmental and personal protection regulations. The Contractor nevertheless is responsible to perform OSHA compliance monitoring to determine the appropriate level of personal protection equipment required for his employees.)

The Project Monitor shall remain on site throughout the duration of the project to ensure that the regulations are being strictly adhered to on a daily basis and all required abatement is completed. In addition to inspections and air sampling, the Project Monitor shall review the contractor's personal OSHA air sampling data, and shall verify that the contractor submits the medical and licensing information for any additional personnel brought to the site. The Project Monitor shall also document that any removed ACM waste is properly bagged, labeled and handled and shall keep a tally of the total amount of ACM waste removed from the site. Prior to ACM waste leaving the site, the Project Monitor shall obtain a copy of the properly completed waste shipment record from the Contractor/Waste Hauler.

Visual inspection of the work site shall be performed to ensure that the area is free of any and all visible asbestos-containing dust and debris at the conclusion of the asbestos abatement. Once this step is reached, final clearance testing can be performed to determine the cleanliness of the work area. Final clearance air sampling shall be conducted in a manner to comply with current CTDPH regulation section 19a-332a-12.

Collected air samples shall be analyzed on-site via phase contrast microscopy (PCM). On-site project monitors shall be registered with the AIHA asbestos analysts registry.

Where laboratory analytical services are required (e.g. TEM air clearance sample analysis) the Consultant shall submit the collected samples to a laboratory accredited by the CTDPH and AIHA for analysis for airborne fiber content. Required laboratory analytical services shall be secured by the Consultant from laboratories providing competitive pricing.

BASIS OF PAYMENT:

Task 740A services shall be assigned on a per person-day basis. For the purposes of this Agreement, a person-day field assignment shall consist of 10 hours and a typical project shall require one project monitor. If project demands require extended workdays, the level of effort will reflect the additional time required.

TASK 710 – INVESTIGATIVE SURVEY
L – LEAD BASED PAINT

OBJECTIVE:

The objective of a Task 710L is to conduct a visual inspection and collect and review measurement/sample data in order to identify the presence and concentration, assess the condition, and quantify the amount of lead based paint and/or hazardous building debris located at a building site.

TASK SCOPE:

Preliminary Site Review

The Consultant shall review the following data provided by ConnDOT:

- Name of building
- Address of property
- Contact names and phone numbers
- Number of structures
- Age of structures
- Size of structures
- Number of floors
- Site layout
- Method of building access
- Building status relative to occupancy, renovation or demolition
- Detailed description of activity to occur at the site (e.g. demolition, reconstruction, welding, sanding, cutting, repainting, occupancy, leasing/sale, etc.)
- Site information regarding oil tanks, septic/sewer, well/city water, natural gas, etc.
- Site information regarding status of public utilities

The Consultant shall schedule field inspection activities with ConnDOT and building occupants.

The Consultant shall determine the sites historic significance with the CT Historical Commission State Historic Preservation Office (SHPO) should the property be >50 yrs old and scheduled for demolition.

Site Inspection and Sampling

The Consultant, utilizing CTDPH certified lead inspectors, shall conduct an investigative survey for lead-based paint (LBP) in/on building components in order to determine if the OSHA Lead Exposure in Construction standards, EPA RCRA hazardous waste disposal regulations and/or CT DEP hazardous waste disposal regulations are applicable to construction/renovation/demolition activities planned for the site.

Lead Based Paint (LBP)

- The Consultant shall utilize an on-site X-Ray fluorescence (XRF) spectrum analyzer in order to inspect for the presence of LBP, operated by a trained inspector.
- The LBP inspection shall follow manufacturers protocol established for the XRF utilized, with the focus being to determine if any detectable level of LBP is present on representative components.
- XRF measurements shall be taken on representative testing combinations (painted surfaces of like color, component and substrate) in proportion to the actual quantity of painted surfaces within the building, in order to provide a representative composite of what building components contain detectable levels of lead of any amount.
- The inspector shall note substrate, color, condition, component and location for each measurement taken.
- If inconclusive measurements cannot be resolved utilizing the XRF, bulk paint chip samples shall be collected and analyzed by atomic absorption spectrophotometry (AAS).

Building Debris Waste Characterization

- Representative composite samples of building component materials scheduled for impact shall be collected on a percent by weight basis so as to approximate the projected waste stream at the site in accordance with CTDEP sampling guidelines. The collected samples shall be analyzed by the Toxicity Characteristic Leaching Procedure (TCLP) for the eight (8) RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver) to characterize the materials for disposal as hazardous or non-hazardous construction waste. The number of parameters for analysis may be reduced based on objective knowledge of the site but must at a minimum include lead and must also include arsenic and chromium should pressure treated lumber be amongst the waste stream. Samples should be collected for the building site as a whole and of any individual components which may undergo disposal separately for any reason (i.e. asbestos-containing, etc.)

Other

- Should the Consultant note any other environmental concerns, (i.e. storage tanks, spills, asbestos, PCBs, fluorescent lights, mercury thermostats, household hazardous waste, mold, etc), the Consultant shall notify ConnDOT of the presence of such concerns.

Report Preparation

Upon completion of the Site Inspection and Sampling, the Consultant shall prepare a report of their findings and conclusions. The report shall be prepared as described below.

TASK PRODUCTS:**Inspection Report**

The inspection report shall include, but not be limited to, the following:

- Project Outline Page with: Site Location, DOT Assignment #, DOT Project #, DOT Project Manager, Inspectors Names/License #, Dates of Survey, Notification of whether Lead Paint was Identified, Cost Estimate for Abatement, Site Historic Significance, Additional Environmental Concerns noted
- Tables of Survey Results (LBP measurements, waste characterizations, etc.)
- Site Photo
- Field Site Sketches
- Correspondence of Historical Status
- Inspector/Laboratory Licenses/Accreditations
- Sample Chain of Custody and Analysis Sheets
- Itemized cost estimate for abatement

BASIS OF PAYMENT:

A 710L assignment shall include all work required to prepare the report required under this Task and shall include but not necessarily be limited to effort required for the following:

- Project Management
- Meeting(s) with ConnDOT
- Review of existing information
- Field Investigation & Sampling
- Laboratory Analysis
- QA/QC
- Report Preparation

The base budget for this task shall depend upon the size of the structure to be investigated. The base budget shall be deemed to include all effort as described above for a project that involves a building structure encompassing up to 2,500 square feet. For each additional 2,500 square foot increment, a separate incremental budget shall be established to cover all costs associated with the additional effort. The total budget for a Task 710L assignment shall include the base budget plus the incremental budget times the number of additional 2,500 square foot increments included. This Basis of Payment shall apply for structures up to 10,000 square feet; for assignments on structures over 10,000 square feet the fees shall be negotiated separately.

TASK 720 – PROJECT DESIGN AND SPECIFICATION DEVELOPMENT
L – LEAD BASED PAINT

OBJECTIVE:

The objective of a Task 720L is to develop plans, specifications and cost estimates for lead abatement, either as stand alone documents or for inclusion in Contract Bid Documents.

TASK SCOPE:

Draft Abatement Review Plan

When abatement of, or activities impacting, LBP are required, the Consultant, utilizing a CTDPH certified lead planner-project designer, shall prepare a preliminary design of the abatement project. The design document shall include, but not be limited to, the following:

- Description of work required
- LBP abatement procedures
- Regulatory references
- Contractor bid qualifications
- Contractor submittals
- Worker protection and decontamination procedures
- Exposure assessments
- Contractor/worker training and medical surveillance requirements
- Clearance criteria (dust wipe/soil/XRF)
- Waste segregation
- Recycling
- Waste stream sampling and characterization (hazardous or non-hazardous)
- Transport and disposal of hazardous and non-hazardous waste
- Procurement of temporary hazardous waste generators EPA I.D. # from the Division of Environmental Compliance
- ConnDOT approved transport and disposal facilities
- Duration of occupant relocation
- Project Designer certifications
- Tables of XRF measurements
- Sample results
- Field Site Sketches or CAD drawings

The Consultant shall contact ConnDOT approved disposal facilities, prior to listing any facilities in the specifications as possible disposal sites, to confirm the acceptance criteria for waste material at each facility in order to specify the proper testing procedures needed on the wastes and confirm that the waste material that is expected to be generated at the site will meet these criteria.

The Consultant shall coordinate the design and set up project meetings, as necessary, with all interested parties to discuss preliminary design requirements and resolve all outstanding items

regarding the project.

The format of the specifications shall be submitted in Construction Specifications Institute (CSI), Standard Specifications for Road Bridges and Incidental Construction 814A or 815, or as directed by the Engineer.

The package shall be submitted to ConnDOT for review and comments.

TASK PRODUCTS:

Final Design (100%)

Based on the input from the review of the draft submittal design plan, a final abatement design package shall be prepared which includes the Technical Specifications and Engineering Drawings.

Prepare Cost Estimate and Schedule for Project Work

The Consultant shall also submit to ConnDOT a budget estimated cost for lead abatement as well as the estimated cost to provide project compliance and project surveillance during the lead abatement activities in a format prescribed by ConnDOT.

BASIS OF PAYMENT:

A 720L assignment shall include all work required to prepare the report required under this Task and shall include but not necessarily be limited to effort required for the following:

- Project Management
- Meeting(s) with ConnDOT
- Review of existing information
- QA/QC
- Report Preparation
- CADD

The base budget for this task shall depend upon the size of the structure involved. The base budget shall be deemed to include all effort as described above for a project that involves a building structure encompassing up to 2,500 square feet. For each additional 2,500 square foot increment, a separate incremental budget shall be established to cover all costs associated with the additional effort. The total budget for a Task 720L assignment shall include the base budget plus the incremental budget times the number of additional 2,500 square foot increments included. This Basis of Payment shall apply for structures up to 10,000 square feet; for assignments on structures over 10,000 square feet the fees shall be negotiated separately.

TASK 725 – OPERATIONS & MAINTENANCE (O&M) PLAN DEVELOPMENT
L – LEAD BASED PAINT

OBJECTIVE:

The objective of a Task 725L is to develop an operations and maintenance plan to allow for proper in-house management and hazard communication of lead based paint to remain in a building.

TASK SCOPE:

Draft O&M Plan Review

When LBP is to remain in place, the Consultant, utilizing a CTDPH certified lead planner-project designer, shall prepare a preliminary Operations and Maintenance Program to properly manage the LBP in place. Key provisions of the O&M Plan shall include, but not be limited to, the following:

- Introduction
- Site description
- Procedures to be followed to maintain LBP surfaces intact
- Discussions on renovation/demolition/maintenance activity
- Hazard Communication: A program to inform workers, tenants, building occupants, and contractors where LBP is located, and how and why to avoid disturbing these areas
- Surveillance: A schedule for periodic inspections of the LBP to record, assess and document any changes in condition of the LBP, provide recommended response actions, and collect additional samples and/or XRF measurements as deemed necessary by the inspector
- Controls: A work control/permit system, including a lead coordinator, to implement work practices that will avoid disturbing the LBP
- Emergency Response: A program to provide emergency response procedures to respond to a release of lead based paint dust and debris.
- Worker Protection: A medical and respiratory program, as applicable
- Training: A training program for the custodial and maintenance staff
- Disclosure: A section on disclosure of lead hazards during real estate transactions and transfer of title regarding the O&M plan

The package shall be submitted to ConnDOT for review and comments.

TASK PRODUCTS:

Final O&M Plan (100%)

Based on input from the review of the draft submittal O&M plan, a final O&M package shall be prepared.

BASIS OF PAYMENT:

A 725L assignment shall include all work required to prepare the report required under this Task and shall include but not necessarily be limited to effort required for the following:

- Project Management
- Meeting(s) with ConnDOT
- Review of existing information
- QA/QC
- Report Preparation
- CADD

The base budget for this task shall depend upon the size of the structure involved. The base budget shall be deemed to include all effort as described above for a project that involves a building structure encompassing up to 2,500 square feet. For each additional 2,500 square foot increment, a separate incremental budget shall be established to cover all costs associated with the additional effort. The total budget for a Task 725L assignment shall include the base budget plus the incremental budget times the number of additional 2,500 square foot increments included. This Basis of Payment shall apply for structures up to 10,000 square feet; for assignments on structures over 10,000 square feet the fees shall be negotiated separately.

TASK 726 – PERIODIC SURVEILLANCE
L – LEAD BASED PAINT

OBJECTIVE:

The objective of a Task 726L is to provide periodic on-site surveillance of lead based paint under in-house management, assess the condition of the coatings, provide recommended response actions and update the existing O&M plan.

TASK SCOPE:

Site Inspection and Sampling

When LBP is to remain in place, the Consultant, utilizing a CTDPH certified lead inspector or lead inspector risk assessor, shall perform a periodic inspection of these areas/components identified in the O&M plan. This inspection shall include a visual survey of the condition of the identified areas/components, and documentation of the findings.

The Consultant shall also collect additional XRF measurements and/or other environmental samples from areas deemed necessary by the lead inspector.

Report Preparation

Upon completion of the Site Inspection and Sampling, the Consultant shall prepare a report of their findings and conclusions. The report shall be prepared as described below.

TASK PRODUCTS:

The Consultant shall prepare a report for each periodic survey conducted which summarizes the findings, recommends response actions, summarizes changes required in the management plan and includes results of all new sampling.

The Consultant shall formally update the O&M plan as the results of periodic inspections dictate and/or after any abatement activities found to be necessary are completed, and reissue the updated O&M plan to ConnDOT and the affected building occupants.

BASIS OF PAYMENT:

A 726L assignment shall include all work required to prepare the report required under this Task and shall include but not necessarily be limited to effort required for the following:

- Project Management
- Meeting(s) with ConnDOT
- Review of existing information
- Field Investigation & Sampling
- Laboratory Analysis

- QA/QC
- Report Preparation

The base budget for this task shall depend upon the size of the structure involved. The base budget shall be deemed to include all effort as described above for a project that involves a building structure encompassing up to 2,500 square feet. For each additional 2,500 square foot increment, a separate incremental budget shall be established to cover all costs associated with the additional effort. The total budget for a Task 726L assignment shall include the base budget plus the incremental budget times the number of additional 2,500 square foot increments included. This Basis of Payment shall apply for structures up to 10,000 square feet; for assignments on structures over 10,000 square feet the fees shall be negotiated separately.

TASK 730 – PROJECT COMPLIANCE
L – LEAD BASED PAINT

OBJECTIVE:

The objective of a Task 730L is to provide project compliance administrative and technical services related to on-site lead abatement activities.

TASK SCOPE:

Prebid Meeting and Walkthrough

After completion of the design specifications, the Consultant may solicit bids for the lead abatement, utilizing those Contractors awarded contracts under the CT DAS asbestos & lead abatement contract, or the Engineer may solicit competitive open bidding. The Consultant shall coordinate and attend the prebid meeting, explain the design specification and conduct a walkthrough. If bidders require information that cannot be clarified at the prebid meeting, Consultant shall develop an addendum which shall be sent to all bidders where applicable.

Contractor Qualification Review

The Consultant shall review the abatement contractor's bid qualifications as identified in the specification.

Contractor Abatement Award

The Consultant shall review the bids and make recommendations to ConnDOT. ConnDOT shall make the contract award.

Funding Requests

For projects where abatement is to be conducted by Contractors listed on the CT DAS asbestos & lead abatement contract, the Consultant shall submit to ConnDOT, funding requests for lead abatement as well as the project compliance and project surveillance required during the lead abatement activities in a format prescribed by ConnDOT. Requests for CT DAS Contractor funding shall be accompanied by a cost estimate supplied by the Contractor.

Review and Approval of Contractor Submittal

Prior to starting the lead abatement project, the Consultant shall review all materials submitted by the lead abatement contractor as required in the specifications. The submittals shall include, but are not limited to:

- Plan, including schedule and manpower, for addressing the lead abatement
- Approval permits for transport and disposal of hazardous and non-hazardous waste, including the EPA I.D. number obtained from the Division of Environmental Compliance

- All licenses, certifications, training, medical data, blood test data, and respiratory fit test data for each supervisor and worker as well as the company, as applicable
- Lead Health Protection Plan, as applicable
- Negative exposure assessment data

Laboratory Coordination

Assist in the selection of the laboratory and coordination for services. Review and recommend approval of laboratory invoices for payment. Evaluate and tabulate laboratory results and provide QA/QC on all laboratory involvement.

Technical Support of Field Personnel

Answer questions that arise in the field; interpret Contract Documents; resolve disputes between Owner/Contractor; provide support to field personnel.

Periodic Visits to the Site

Make visits to the work site to address critical work issues. All visits to the site will require documentation regarding the reasons/activities that occurred as part of the project monitors daily surveillance logs.

Invoice Review

The Consultant shall review contractor invoices for payment for concurrence with field records, contract rates and backup documentation. The Consultant shall resolve any invoice discrepancies with the contractor and prepare and submit necessary ConnDOT payment forms to the Department's Project Engineer for further processing and payment.

Report Preparation

Upon completion of the project activity, the Consultant shall prepare compliance reports based on their oversight. The report shall be prepared as described below.

TASK PRODUCTS:

Letter of Compliance

After the conclusion of project activity, and the receipt of satisfactory reinspection clearance criteria results (if applicable), the Consultant shall issue a letter of compliance to ConnDOT indicating the reasons lead abatement was undertaken, the Contractor who performed such services, and the date of completion.

Project Compliance Report

At the completion of the abatement project, the Consultant shall prepare a documentation compliance package that shall provide ConnDOT with a complete set of records documenting all

Task 730L – Project Compliance

activities that took place at the site. This package shall be suitable for use by ConnDOT if future questions arise concerning LBP.

The completed documentation package shall include:

- Executive summary report of all activities
- Daily site logs
- A project outline with Site Location, DOT Project #, DOT Assignment #, DOT Project Manager, Dates of the project, Contractor name and license #, Consultant Project Monitors/Inspectors and licenses/accreditations, lists of materials abated, hazardous waste hauler, hazardous waste disposal facility, amount of hazardous waste generated and EPA ID#, amount of non-hazardous waste generated, amount of CT regulated waste generated, locations of remaining LBP
- Sample chain of custody sheets and laboratory results for air, dust, soil, paint chip or waste stream samples
- Tables of any XRF measurements taken
- Sign-in sheets
- Abatement Contractor License
- Project Monitor certifications
- Contractor supervisor and worker training and medical records and licenses
- Contractor OSHA personnel air sample results
- Calibration records for testing equipment used
- Laboratory accreditations
- EPA hazardous waste I.D. #
- Waste disposal records/manifests
- All Contractor submittals
- Letter of compliance

BASIS OF PAYMENT:

A 730L assignment shall include all work required to provide administrative and technical support to the project and prepare the reports required under this Task and shall include but not necessarily be limited to effort required for the following:

- Project Management
- Meeting(s) with ConnDOT
- Coordination with field staff, Contractor and Laboratories
- Site Visits
- QA/QC
- Report Preparation

The base budget for this task shall depend upon the size of the structure involved. The base budget shall be deemed to include all effort as described above for a project that involves a building structure encompassing up to 2,500 square feet. For each additional 2,500 square foot increment, a separate incremental budget shall be established to cover all costs associated with the additional

effort. The total budget for a Task 730L assignment shall include the base budget plus the incremental budget times the number of additional 2,500 square foot increments included. This Basis of Payment shall apply for structures up to 10,000 square feet; for assignments on structures over 10,000 square feet the fees shall be negotiated separately.

TASK 740 – PROJECT SURVEILLANCE
L – LEAD BASED PAINT

OBJECTIVE:

The objective of a Task 740L is to provide an on-site project monitor/inspector to support the Engineer to ensure Contractor compliance with the plans, specifications and regulations when performing lead abatement.

TASK SCOPE:

Field Project Management

Consultant shall be the liaison to ConnDOT regarding field activities, coordinating and scheduling with Contractor, laboratories, CTDPH, CTDEP, OSHA, EPA.

Consultant shall perform daily field coordination with and oversight of the on-site Project Monitor.

Air Monitoring, Site Inspections and Project Oversight

The Consultant shall assign an inspector to provide construction administration, air sampling, dust wipe sampling, soil sampling, XRF testing, waste stream sampling and inspection services during the lead abatement project.

The inspector shall provide daily inspections of the work area to ensure that the abatement contractor is conducting the project in accordance with the specifications and all applicable regulations.

Daily project activities, as well as all observations made during the visual inspections shall be written down by the inspector in a permanent log book kept at the site. The inspector shall verify that a contractor maintains a daily sign-in sheet where all personnel performing work in the regulated area shall be required to sign in and out.

In addition to the daily inspection services, the inspector shall conduct daily air sampling on projects that involve work on lead containing materials. The number of samples to be collected shall depend upon what activities are taking place and the size of the project. The intent of the air sampling is to verify compliance with the OSHA Lead in Construction permissible exposure limits.

The inspector may collect representative waste stream samples of all waste materials generated during the project, and have these samples analyzed for all parameters necessary based upon the selected disposal facilities acceptance criteria. Prior to any waste leaving the site the inspector shall document that the waste is being removed in accordance with all applicable requirements, including obtaining a copy of all waste manifests from the Contractor/Waste Hauler and ensuring that the waste is manifested for the disposal facility identified. For hazardous waste leaving the site, the on-site project monitor shall sign off as an Agent for ConnDOT as the generator on the hazardous waste manifests.

Samples collected shall be submitted for analysis by the Consultant to laboratories appropriately accredited for such analysis. Required laboratory services shall be secured by the Consultant from laboratories providing competitive pricing. All sampling results (air, dust, soil, XRF) shall be logged by the inspector into the permanent log book on site.

The inspector shall remain on site throughout the duration of the project to ensure that the regulations are being strictly adhered to on a daily basis and all required abatement work is completed.

Following work the inspector shall conduct a reinspection of each area, which shall include, but not be limited to, the following:

- visual inspection that all areas of work have been conducted following the design specification plan
- visual inspection that all dust and debris in any remediation work area has been cleaned and removed
- clearance dust wipe sampling, as necessary
- clearance soil sampling, as necessary
- clearance XRF measurements on components which have undergone LBP removal

In addition, the inspector shall conduct dust wipe, soil, air or XRF testing whenever deemed necessary.

BASIS OF PAYMENT:

Task 740L services shall be assigned on a per person-day basis. For the purposes of this Agreement, a person-day field assignment shall consist of 10 hours and a typical project shall require one project monitor. If project demands require extended workdays, the level of effort will reflect the additional time required.

TASK 710 – INVESTIGATIVE SURVEY
B – ASBESTOS/LEAD/OTHER HAZARDOUS MATERIALS & DEMOLITION

OBJECTIVE:

The objective of a Task 710B is to conduct a visual inspection/inventory and collect and review sample data in order to identify the presence and types, assess the condition, and quantify the amount of asbestos, lead paint, other hazardous materials/wastes, and related site conditions (utilities to abandon, etc.) located at a building site, typically in support of a demolition project or major renovation.

TASK SCOPE:

Preliminary Site Review

The Consultant shall review the following data provided by ConnDOT:

- Name of building
- Address of property
- Contact names and phone numbers
- Number of buildings
- Age of buildings
- Size of buildings
- Number of floors
- Site layout
- Method of building access
- Building status relative to occupancy, renovation or demolition
- Detailed description of activity to occur at the site (e.g. demolition, reconstruction, occupancy, leasing/sale etc.)
- Site information regarding oil tanks, septic/sewer, well/city water, natural gas, etc.
- Site information regarding status of public utilities

The Consultant shall schedule field inspection activities with ConnDOT and building occupants

Historical Significance Determination

The Consultant shall determine the sites historical significance with the CT Historical Commission State Historic Preservation Office (SHPO) should the property be >50 years old and scheduled for demolition in accordance with CGS Section 4b-64, including requesting written determination from the SHPO, publishing notices of intent to demolish in local newspapers and posting the building structure with notices of intent to demolish.

Site Inspection and Sampling

ASBESTOS (ACM):

The Consultant, utilizing CTDPH certified asbestos inspectors, shall conduct an investigative survey for asbestos-containing material (ACM) according to the Asbestos Hazard Emergency Response Act (AHERA) sampling protocol. After studying the preliminary site review data, the inspector(s) shall physically walk through the facility, reviewing the building from the basement to the top floor, checking all spaces within the building including, but not limited to, all floors, walls, ceilings, air plenums, ventilation ducts, electrical rooms, boiler rooms, crawlspaces and pipe chases as well as the exterior of the building including the roof, siding and buried materials.

Bulk samples shall be collected by the Consultant that are representative of each of the suspect materials identified during the walk through in accordance with AHERA sampling protocol. Suspect materials include, but are not limited to, boiler and tank insulation, boiler breeching, pipe insulation, mudded pipe fitting insulation, plaster (base & skim coats), wallboard/joint compound, ceiling tile, floor covering, window glazing/caulking, mastics, base cove, fireproofing, fire doors, siding and roofing materials. Generally, these samples shall be collected in locations that reduce the potential for exposure to building occupants and shall follow procedures that would prevent the emission of asbestos fibers into the air.

The Consultant shall submit the collected samples to a laboratory accredited by the CTDPH and NVLAP for analysis for asbestos content. Analytical services shall be secured by the Consultant from laboratories providing competitive pricing.

Laboratory analysis shall be performed on all samples using polarized light microscopy (PLM) with visual area estimate (vae) quantification. Multi-layered materials such as plaster, sheetrock/joint compound, floor tile/mastic, etc shall be analyzed separately. Plaster layers, sheetrock/joint compounds and similar materials with asbestos detected in quantities less than 5% using visual area estimate (vae) techniques, shall be further quantified via point counting techniques to obtain a more accurate quantification of asbestos content. Gravimetric reduction (gr) preparation techniques shall be utilized on non-friable organically bound (NOB) samples as appropriate, with negative results on NOB samples confirmed through the use of transmission electron microscopy (TEM).

LEAD PAINT (LBP):

The Consultant shall conduct an investigative survey for lead-based paint (LBP) and other metals in/on building components in order to determine if the OSHA Lead Exposure in Construction standards, EPA RCRA hazardous waste disposal regulations and/or CT DEP hazardous waste disposal regulations are applicable to construction/renovation/demolition activities planned for the site.

The Consultant, utilizing CTDPH certified lead inspectors, shall conduct an investigative survey for lead-based paint (LBP) in/on building components in order to determine if the OSHA Lead Exposure in Construction standards, EPA RCRA hazardous waste disposal regulations and/or CT DEP hazardous waste disposal regulations are applicable to construction/renovation/demolition activities planned for the site.

Lead Based Paint (LBP)

- The Consultant shall utilize an on-site X-Ray fluorescence (XRF) spectrum analyzer in

- order to inspect for the presence of LBP, operated by a trained inspector.
- The LBP inspection shall follow manufacturers protocol established for the XRF utilized, with the focus being to determine if any detectable level of LBP is present on representative components.
 - XRF measurements shall be taken on representative testing combinations (painted surfaces of like color, component and substrate) in proportion to the actual quantity of painted surfaces within the building, in order to provide a representative composite of what building components contain detectable levels of lead of any amount.
 - The inspector shall note substrate, color, condition, component and location for each measurement taken.
 - If inconclusive measurements cannot be resolved utilizing the XRF, bulk paint chip samples shall be collected and analyzed by atomic absorption spectrophotometry (AAS).

Building Debris Waste Characterization

- Representative composite samples of building component materials scheduled for impact shall be collected on a percent by weight basis so as to approximate the projected waste stream at the site in accordance with CTDEP sampling guidelines. The collected samples shall be analyzed by the Toxicity Characteristic Leaching Procedure (TCLP) for the eight (8) RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver) to characterize the materials for disposal as hazardous or non-hazardous construction waste. The number of parameters for analysis may be reduced based on objective knowledge of the site but must at a minimum include lead and must also include arsenic and chromium should pressure treated lumber be amongst the waste stream. Samples should be collected for the building site as a whole and of any individual components which may undergo disposal separately for any reason (i.e. asbestos-containing, etc.)

OTHERS:

The Consultant shall visually inventory any other identifiable hazardous materials/wastes/environmental concerns which will require special handling or disposal during renovation/demolition. Such items would include: above ground & underground storage tanks (AST/UST), spills, PCB's, fluorescent light fixture lamps/ballasts, mercury thermostat ampules, transformers, "household hazardous waste", tires, air conditioners, microwave ovens, refrigerators, used electronics, mold, guano, etc.

The Consultant shall also make note of other related building conditions which would present a construction site issue with respect to the planned renovation/demolition activity at the site (particularly if the building is scheduled for demolition), such as septic tanks, sewer service, water wells, electrical lines/meters, water service/meters, natural gas service/meters, telephone/cable lines, etc.

Report Preparation

Upon completion of the Site Inspection and Sampling, the Consultant shall prepare a report of their findings and conclusions. The report shall be prepared as described below.

TASK PRODUCTS:

At the conclusion of the inspection, the consultant shall prepare a documentation package which includes, but is not limited to:

- Project Outline Page with Site Location, DOT Assignment #, DOT Project #, DOT Project Manager, Inspectors Names/License #, Dates of Survey, ACM identified, LBP identified, Hazardous Building Material identified, Other Hazardous Materials identified, Cost estimates for Abatement & Demolition, Site Historic Significance, Additional site/utility concerns
- Tables of Survey Results (samples, ACM, non-ACM, LBP, Waste Characterizations, Additional Hazardous Materials)
- Site Photos
- Field Site Sketches indicating sampling locations and identified concerns
- Correspondence of Historical Status
- Inspector/Laboratory Licenses/Accreditations
- Sample chain of custody and laboratory analysis sheets
- Itemized cost estimate for abatement
- Itemized cost estimate for demolition
- Utility Disconnect Notices

BASIS OF PAYMENT:

A 710B assignment shall include all work required to prepare the report required under this Task and shall include but not necessarily be limited to effort required for the following:

- Project Management
- Meeting(s) with ConnDOT
- Review of existing information
- Field Investigation & Sampling
- Laboratory Analysis
- QA/QC
- Report Preparation

The base budget for this task shall depend upon the size of the structure to be investigated. The base budget shall be deemed to include all effort as described above for a project that involves a building structure encompassing up to 2,500 square feet. For each additional 2,500 square foot increment, a separate incremental budget shall be established to cover all costs associated with the additional effort. The total budget for a Task 710B assignment shall include the base budget plus the incremental budget times the number of additional 2,500 square foot increments included. This Basis of Payment shall apply for structures up to 10,000 square feet; for assignments on structures

over 10,000 square feet the fees shall be negotiated separately.

**TASK 720 – PROJECT DESIGN AND SPECIFICATION DEVELOPMENT
B – ASBESTOS/LEAD/OTHER HAZARDOUS MATERIALS & DEMOLITION**

OBJECTIVE:

The objective of a Task 720Bis to develop plans, specifications and cost estimates as applicable for asbestos abatement, lead abatement, hazmat abatement and/or demolition, either as stand alone documents or for inclusion in Contract Bid Documents.

TASK SCOPE:

Draft Submittal Review Plan

ASBESTOS/LEAD/HAZMAT:

When abatement of ACM/LBP/HazMat is dictated, the Consultant, utilizing appropriately certified personnel, shall prepare preliminary designs of the abatement projects. The design documents shall include, but not be limited to the following:

- Description of work required
- ACM/LBP/HazMat abatement procedures
- Regulatory references
- Contractor bid qualifications
- Contractor submittals
- Worker protection and decontamination procedures
- Exposure assessments
- Contractor/worker licensing, training and medical surveillance requirements
- Clearance criteria
- Waste transport and disposal requirements/segregation/characterization/recycling
- Procurement of temporary hazardous waste generators EPA I.D. # from the Division of Environmental Compliance
- ConnDOT approved transport and disposal facilities
- Alternative work practices (AWP's) (if applicable)
- Project designer certification
- Sample results/measurements
- Field Site Sketches or CAD drawings

The designs shall include a list of all applicable regulations and permits that shall be required for the project. The list shall include applicable State, Federal and Local regulations, and permits, with names, addresses and telephone numbers of regulation personnel. Typically the USEPA Region I, OSHA, EPA, State of Connecticut Department of Public Health (CTDPH) and State of Connecticut Department of Environmental Protection regulations and notifications are to be followed. Additionally, local regulations and permits may be required including, but not limited to, building permits and notification to the Health and Fire Departments.

The Consultant shall contact ConnDOT approved disposal facilities, prior to listing any facilities

in the specifications as possible disposal sites, to confirm the acceptance criteria for waste material at each facility in order to specify the proper testing procedures needed on the wastes and confirm that the waste material that is expected to be generated at the site will meet these criteria.

The consultant shall coordinate the design and set up project meetings as required with all interested parties to discuss preliminary design requirements and resolve all outstanding items regarding the project.

The format of the specifications shall be submitted in Construction Specifications Institute (CSI), Standard Specifications for Road Bridges and Incidental Construction 814A or 815, or as directed by the Engineer.

The package shall be submitted to ConnDOT for review and comments.

DEMOLITION:

When building demolition is scheduled to be conducted by Contractors listed on the CTDas on-call Environmental Services Contract, the Consultant, using appropriately certified personnel, shall prepare a preliminary design of the demolition project including procedures for demolition, backfill and site grading, use of clean fill on site, hazardous material handling/disposal, dust suppression, erosion control, septic abandonment, well abandonment, AST/UST closure, sewer line capping, other utility work, waste disposal/recycling, salvage, etc.. The design documents shall include, but not be limited to, the following:

- Description of work required
- Procedures to be implemented
- Regulatory references
- Contractor bid qualifications
- Contractor submittals
- Worker protection and decontamination procedures
- Exposure assessments
- Clearance sampling (UST)
- Third party inspection (UST/sewer/etc.)
- Contractor/worker licensing, training and medical surveillance requirements
- Waste segregation/recycling
- Waste packing, transport and disposal requirements
- Procurement of temporary hazardous waste generators EPA I.D. # from the Division of Environmental Compliance
- ConnDOT approved transport and disposal facilities
- Utility disconnect notices
- Connecticut Historic Commission SHPO historic status determination
- Asbestos Abatement Letter of Compliance
- Sample results/tables (XRF, TCLP, "Others", etc)
- Field site sketches/photos

The consultant shall coordinate the design and set up project meetings as required with all interested parties to discuss preliminary design requirements and resolve all outstanding items regarding the project.

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parties to discuss preliminary design requirements and resolve all outstanding items regarding the project.

The format of the specifications shall be submitted in Construction Specifications Institute (CSI), Standard Specifications for Road Bridges and Incidental Construction 814A or 815, or as directed by the Engineer.

The package shall be submitted to ConnDOT for review and comments.

TASK PRODUCTS:

Final Design (100%)

Based on input from the review of the draft submittal design plans, final specification packages shall be prepared for abatement and demolition as required, which include Technical Specifications and Engineering Drawings.

Prepare Cost Estimate and Schedule for Abatement/Demolition

The Consultant shall also submit to ConnDOT a budget estimated cost for abatement and/or demolition as well as the estimated cost to provide project compliance and project surveillance during the abatement and demolition activities in a format prescribed by ConnDOT.

BASIS OF PAYMENT:

A 720B assignment shall include all work required to prepare the report required under this Task and shall include but not necessarily be limited to effort required for the following:

- Project Management
- Meeting(s) with ConnDOT
- Review of existing information
- QA/QC
- Report Preparation
- CADD

The base budget for this task shall depend upon the size of the structure involved. The base budget shall be deemed to include all effort as described above for a project that involves a building structure encompassing up to 2,500 square feet. For each additional 2,500 square foot increment, a separate incremental budget shall be established to cover all costs associated with the additional effort. The total budget for a Task 720B assignment shall include the base budget plus the incremental budget times the number of additional 2,500 square foot increments included. This Basis of Payment shall apply for structures up to 10,000 square feet; for assignments on structures over 10,000 square feet the fees shall be negotiated separately.

TASK 730 – PROJECT COMPLIANCE
B – ASBESTOS/LEAD/OTHER HAZARDOUS MATERIALS & DEMOLITION

OBJECTIVE:

The objective of a Task 730B is to provide project compliance administrative and technical services related to on-site abatement and demolition related activities.

TASK SCOPE:

Prebid Meetings and Walkthroughs

At completion of the design specifications, the Consultant may solicit separate bids for the asbestos and/or lead and/or hazmat abatement and/or demolition, utilizing those Contractors awarded contracts under the CT DAS on-call contracts, or the Engineer may solicit competitive open bidding. The Consultant shall coordinate and attend the prebid meetings, explain the design specifications and conduct walkthroughs. If bidders require information that cannot be clarified at the prebid meetings, Consultant shall develop addendums that shall be sent to all bidders where applicable.

Contractor Qualification Reviews

The consultant shall review the abatement and demolition contractor's bid qualifications as identified in the specification.

Contractor Awards

The consultant shall review the bids and make recommendations to ConnDOT. ConnDOT shall make the contract awards.

Funding Requests

For projects where abatement and/or demolition is to be conducted by Contractors listed on the CT DAS on-call contracts, the Consultant shall submit to ConnDOT, funding requests for abatement and demolition as well as the project compliance and project surveillance required during the abatement and demolition activities in a format prescribed by ConnDOT. Requests for CT DAS Contractor funding shall be accompanied by a cost estimates supplied by the Contractors.

Review and Approval of Contractor Submittals

Prior to starting the asbestos/lead abatement or demolition projects, the Consultant shall review all materials submitted by the asbestos/lead abatement or demolition contractors as required in the specification. The submittals shall include, but are not limited to:

ASBESTOS/LEAD ABATEMENT:

- Notifications to EPA and/or CTDPH.
 - Any written request for a variance or alternative work practice from the CTDPH, OSHA or
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EPA standards.

- All licenses, certifications, training, medical data and respiratory fit test data for each supervisor and worker as well as the company.
- Negative exposure assessments
- Plan, including schedule and manpower, for addressing the ACM/LBP abatement.
- Approval permits for transport and disposal of hazardous and non-hazardous waste, including the EPA I.D. number obtained from the Division of Environmental Compliance
- Lead Health Protection Plan (LHPP) or Health & Safety Plan, as applicable.

DEMOLITION:

- Plan, including schedule and manpower for performing the work.
- Proposed waste hauler and disposal facility for hazardous and recyclable waste to be generated.
- EPA ID# obtained from the Division of Environmental Compliance for hazardous waste generation.
- Health and Safety Plan, as applicable.
- Demolition Permit
- All licenses, certifications, training, medical data, blood test data, and respiratory fit test data for each worker, as applicable

Laboratory Coordination

Assist in the selection of the laboratory and coordination for services. Review and recommend approval of laboratory invoices for payment. Evaluate and tabulate laboratory results and provide QA/QC on all laboratory involvement.

Technical Support of Field Personnel

Answer questions that arise in the field; interpret Contract Documents; resolve disputes between Owner/Contractor; provide support to field personnel.

Periodic Visits to the Site

Make visits to the work site to address critical work issues. All visits to the site will require documentation regarding the reasons/activities that occurred as part of the project monitors daily surveillance logs.

Invoice Review

The Consultant shall review the abatement and demolition contractor's invoices for payment for concurrence with field records, contract rates, and backup documentation. The Consultant shall resolve any invoice discrepancies with the contractors and prepare and submit necessary ConnDOT payment forms to the Department's Project Engineer for further processing and payment.

Report Preparation

Upon completion of the project activity, the Consultant shall prepare compliance reports based on their oversight. The reports shall be prepared as described below.

TASK PRODUCTS:

Abatement Letter of Compliance

After the conclusion of asbestos/lead/hazmat abatement project activity, and the receipt of satisfactory clearance criteria results, the Consultant shall issue a letter of compliance to ConnDOT indicating the reasons abatement was undertaken, the Contractor who performed such services and the date of completion.

Letter of Demolition Completion

After the conclusion of demolition and related site activity, the Consultant shall issue a letter of demolition completion to ConnDOT indicating the Contractor who performed such services and the date of completion.

Project Compliance Reports

ASBESTOS/LEAD:

At the completion of the abatement project, the Consultant shall prepare a documentation package that shall provide ConnDOT with a complete set of records documenting all activities that took place at the site. This package shall be suitable for use by ConnDOT if future questions arise concerning ACM/LBP/HazMat.

The completed documentation package shall include:

- Executive summary report of all activities.
- Daily site logs
- A project outline with Site Location, DOT Project #, DOT Assignment #, DOT Project Manager, Dates of project, Contractor name and license #, Consultant Project Monitor/Air Sample Analyst/Inspector names and licenses/accreditations, lists of materials abated, amount of ACM/LBP/Hazardous material/waste generated, ACM/LBP/Hazardous waste hauler, ACM/LBP/Hazardous waste disposal facility
- Sample chain of custody sheets and laboratory results for samples collected
- Notifications of asbestos abatement (EPA and CTDPH)
- Copies of Alternative Work Practices/Variances if applicable.
- Sign in Sheets
- Abatement contractor license
- Project Monitor certifications
- Laboratory accreditations
- Abatement contractor medical/training records.
- Contractor OSHA personal air sample results.

- Calibration records for testing equipment used
- Waste shipment records/Hazardous Waste Manifests.
- All contractor submittals.
- Letter of compliance

DEMOLITION:

At the completion of the demolition project, the Consultant shall prepare a documentation package that shall provide ConnDOT with a complete set of records documenting all activities that took place at the site. This package shall be suitable for use by ConnDOT if future questions arise concerning demolition and related site activities.

The completed documentation package shall include:

- Executive summary report of all activities
- Daily site logs
- A project outline with Site Location, DOT Project #, DOT Assignment #, DOT Project Manager, Dates of project, Contractor name and license #, Consultant Project Monitor/Inspector names and licenses/accreditations, lists of activities conducted, amount of Hazardous/Regulated material/waste generated, Hazardous/Regulated waste hauler, Hazardous/Regulated waste disposal facility, Bulky Waste Disposal facility
- Sample chain of custody sheets and laboratory results for samples collected
- Demolition permit
- Contractor License
- Waste Manifests/Bills of Lading/Recycling Receipts
- Connecticut Historical Commission historic status determination
- Well abandonment verification form
- Site photos (UST pull, sewer line cap, demo, etc.)
- Utility disconnect notices
- Letters of abatement compliance and demolition completion

BASIS OF PAYMENT:

A 730B assignment shall include all work required to provide administrative and technical support to the project and prepare the reports required under this Task and shall include but not necessarily be limited to effort required for the following:

- Project Management
- Meeting(s) with ConnDOT
- Coordination with field staff, Contractor and Laboratories
- Site Visits
- QA/QC
- Report Preparation

The base budget for this task shall depend upon the size of the structure involved. The base budget

shall be deemed to include all effort as described above for a project that involves a building structure encompassing up to 2,500 square feet. For each additional 2,500 square foot increment, a separate incremental budget shall be established to cover all costs associated with the additional effort. The total budget for a Task 730B assignment shall include the base budget plus the incremental budget times the number of additional 2,500 square foot increments included. This Basis of Payment shall apply for structures up to 10,000 square feet; for assignments on structures over 10,000 square feet the fees shall be negotiated separately.

TASK 740 – PROJECT SURVEILLANCE
B – ASBESTOS/LEAD/OTHER HAZARDOUS MATERIALS & DEMOLITION

OBJECTIVE:

The objective of a Task 740B is to provide an on-site project monitor/inspector to support the Engineer to ensure Contractor compliance with the plans, specifications and regulations when performing abatement and/or demolition related activity.

TASK SCOPE:

Field Project Management

Consultant shall be the liaison to ConnDOT regarding field activities, coordinating and scheduling with Contractor, laboratories, CTDPH, CTDEP, OSHA, EPA.

Consultant shall perform daily field coordination with and oversight of the on-site Project Monitor.

Air Monitoring, Site Inspections and Project Oversight

ASBESTOS/LEAD:

The Consultant shall assign a CTDPH licensed Asbestos Project Monitor to provide construction administration, sampling and inspection services during the asbestos abatement project and/or assign a trained field inspector/project monitor to provide construction administration, and industrial hygiene/sampling services during a lead or hazmat abatement project.

The Project Monitor shall provide daily inspections of the work area to ensure that the abatement contractor is conducting the project in accordance with the project specification and all applicable regulations.

Daily project activities, as well as all observations made during the visual inspections shall be written down by the Project Monitor in a permanent log book kept at the site. The Project Monitor shall verify that a contractor maintains a daily sign in sheet where all personnel performing work in the regulated area shall be required to sign in and out.

In addition to the daily inspection services, the Project Monitor shall conduct daily perimeter air sampling on the outside of the regulated areas. The number of samples to be taken shall depend upon what abatement activities are taking place and the size of the project. The intent of the air sampling is to verify the effectiveness of the engineering controls and to detect possible contamination of non-work areas with airborne asbestos fibers or airborne lead contamination. Additional area testing shall be conducted within the regulated area in order to evaluate the contaminant levels during the asbestos/lead abatement work to ensure safe work practices and verify compliance with OSHA permissible exposure limits.

Results of air sample analysis shall be recorded in the site log book. These results shall be compared to acceptable standards, based on current regulations and guidelines. (Samples taken with the

regulated area shall be monitored to ascertain that the Contractor is making acceptable efforts (e.g., wetting) to keep the airborne concentrations of contaminants and residue to a level appropriate to environmental and personal protection regulations. The Contractor nevertheless is responsible to perform OSHA compliance monitoring to determine the appropriate level of personal protection equipment required for his employees.)

The Project Monitor shall remain on site throughout the duration of the project to ensure that the regulations are being strictly adhered to on a daily basis and all required abatement is completed.

In addition to inspections and air sampling, the Project Monitor shall review the contractor's personal OSHA air sampling data, and shall verify that the contractor submits the medical and licensing information for any additional personnel brought to the site.

The Project Monitor may collect representative waste stream samples of all waste materials generated during the project, and have these samples analyzed for all parameters necessary based upon the selected disposal facilities acceptance criteria. The Project Monitor shall also document that any removed ACM/LBP/Hazardous material/waste is properly contained, labeled and handled and shall keep a tally of the total amount of waste removed from the site. Prior to waste leaving the site, the Project Monitor shall obtain a copy of the properly completed waste shipment/disposal record or manifest from the Contractor/Waste Hauler. For hazardous waste leaving the site, the on-site project monitor shall sign off as an "Agent for ConnDOT" as the generator on the hazardous waste manifest.

Visual inspection of the work site shall be performed to ensure that the area is free of any and all visible asbestos-containing dust and debris, lead-contaminated dust and debris and or hazardous materials at the conclusion of the abatement. Once this step is reached, final clearance testing can be performed to determine the cleanliness of the work area. For asbestos abatement projects final clearance air sampling shall be conducted in a manner to comply with current CTDPH regulation section 19a-332a-12. For lead abatement projects, final clearance dust wipe, soil sample or XRF measurements may be performed as applicable and specified. For hazmat abatement projects, final clearance testing will be determined on a case by case basis between the Engineer and Consultant based on the materials being removed.

Asbestos air samples collected shall be analyzed on site via phase contract microscopy (PCM). On site project monitors shall be registered with the AIHA asbestos analysts registry.

Where laboratory analytical services are required, the Consultant shall submit the collected samples to a laboratory accredited for such analysis. Required laboratory analytical services shall be secured by the Consultant from laboratories providing competitive pricing.

DEMOLITION:

For building demolition oversight, Consultant shall assign appropriately trained (HAZWOPER) on-site personnel to oversee the demolition Contractors activities and provide industrial hygiene services, as follows:

Oversight and confirmation of sewer pipe disconnection and capping, coordinated with the Town Inspector sign off.

Oversight of septic tank cleaning, crushing and filling in accordance with the Public Health Code requirements.

Oversight of well abandonment in accordance with the CTDCP Well Drilling Code.

Oversight and confirmation that all “household hazardous waste” items are properly gathered, packed and removed from site for disposal/recycling utilizing proper record keeping/manifesting. Such items could include PCB fluorescent light ballasts, Hg fluorescent lamps, Hg thermostat ampules, lead flashing, paints, oils, solvents, gasoline, corrosives, poisons, flammables, gas cylinders, ammunition, PCB microwave capacitors, PCB air conditioner capacitors, refrigerants, used electronics, lead acid batteries, etc., including manifesting of any hazardous waste planned for disposal.

Oversight and confirmation of oil aboveground storage tank (AST) clean-out and removal, including manifesting of the oil for recycling.

Oversight and sampling of oil underground storage tank (UST) excavation, clean-out and removal, including coordination with the Town Fire Marshall sign off, manifesting of the oil for recycling, confirmation clearance soil sampling from the excavation site for CT extractable total petroleum hydrocarbon (ETPH), semi-volatile organics via EPA 8270 and aromatic volatile organics and MTBE via EPA 8021 or 8260 (with volatile sampling conducted using collection method EPA 5035), following the CTDEP Sampling & Analytical Methods for UST Closure guidelines dated 10/27/99, and ambient volatile organic air sampling through the use of an organic vapor analyzer.

Oversight of building demolition, dust suppression, backfill and grading activity to ensure Contractor is conducting project in accordance with the specifications and applicable regulations, including recording all activity and observations in a permanent log book.

Conducting daily air sampling on projects that involve demolition of lead painted materials and/or silica based materials (e.g. concrete). The number of samples to be collected shall depend upon what activities are taking place and the size of the project. The intent of the air sampling is to verify compliance with the OSHA Lead and Silica permissible exposure limits.

Collect representative waste stream samples of all waste materials generated during the project, and have these samples analyzed for all parameters necessary based upon the selected disposal facilities acceptance criteria. Prior to any waste leaving the site the inspector shall document that the waste is being removed in accordance with all applicable requirements, including obtaining a copy of all waste manifests from the Contractor/Waste Hauler and ensuring that the waste is manifested for the disposal facility identified.

For hazardous waste leaving the site, the on-site project monitor shall sign off as an “Agent for ConnDOT” as the generator on the hazardous waste manifests.

Where laboratory analytical services are required, the Consultant shall submit the collected samples to a laboratory accredited for such analysis. Required laboratory analytical services shall be secured by the Consultant from laboratories providing competitive pricing.

BASIS OF PAYMENT:

Task 740B services shall be assigned on a per person-day basis. For the purposes of this Agreement, a person-day field assignment shall consist of 10 hours and a typical project shall require one project monitor. If project demands require extended workdays, the level of effort will reflect the additional time required.

TASK 710 – INVESTIGATIVE SURVEY
D – LEAD BASED PAINT HAZARDS AT RESIDENTIAL DWELLINGS

OBJECTIVE:

The objective of a Task 710D is to conduct a visual inspection and collect and review measurement/sample data in order to identify the presence and concentration, assess the condition, and quantify the lead based paint hazards (paint, dust and soil) located at a residential dwelling, such that childhood lead poisoning can be prevented.

TASK SCOPE:

Preliminary Site Review

The Consultant shall review the following data provided by ConnDOT:

- Address of property
- Contact names and phone numbers
- Number, Age & Size of structures
- Number of floors
- Number of dwelling units and rooms per unit
- Method of building access
- Occupancy status, number of occupants and ages

The Consultant shall schedule field inspection activities with ConnDOT and building residents.

The Consultant shall attempt to ascertain if any child residing at the dwelling has an elevated blood lead level.

The Consultant shall determine the sites historic significance with the CT Historical Commission State Historic Preservation Office (SHPO) should the property be >50 yrs old.

Site Inspection and Sampling

The Consultant, utilizing a CTDPH licensed lead inspector or lead inspector risk assessor, shall conduct an investigative survey for lead-based paint (LBP) and associated hazards (soil and dust) in accordance with the Connecticut Department of Public Health (CTDPH) Lead Poisoning Prevention and Control (LPP&C) Regulations.

Painted Surfaces

- The Consultant shall utilize an on-site X-Ray fluorescence (XRF) spectrum analyzer in accordance with CTDPH LPP&C and EPA/HUD Performance Characteristic Sheet (PCS) protocols in order to inspect for the presence of LBP
- XRF measurements shall be taken on representative testing combinations (painted surfaces of like room, component, and substrate) following the CTDPH inspection

- protocols to identify those components with toxic levels of lead based paint.
- The inspector shall note substrate, color, condition, component and location for each measurement taken.
 - If inconclusive measurements cannot be resolved utilizing the XRF, bulk paint chip samples shall be collected and analyzed by atomic absorption spectrophotometry (AAS).

Dust

- Dust samples shall be collected from areas of potential lead dust contamination in accordance with EPA Title X/HUD Risk Assessment sampling protocols and analyzed by AAS for total lead. Dust wipe media shall meet the ASTM standard for sampling media.

Soil

- Soil samples shall be collected from each side of the dwelling structures in accordance with the CTDPH Draft Guidance Document for the Assessment and Abatement of Lead Contaminated Soil and the USEPA Title X/HUD Risk Assessment sampling protocols and analyzed by AAS for total lead.

Other

- Should the Consultant note any other environmental hazards concerns, (i.e. storage tanks, spills, asbestos, PCBs, fluorescent lights, mercury thermostats, household hazardous waste, mold, etc), the Consultant shall notify ConnDOT of the presence of such concerns.

Where laboratory analytical services are required, the Consultant shall submit the collected samples to a laboratory accredited for such analysis. Required laboratory analytical services shall be secured by the Consultant from laboratories providing competitive pricing.

Notifications

The Consultant shall make the following notifications in accordance with the time requirements outlined the CTDPH LPP&C regulations should lead hazards be identified in a dwelling with children under the age of six (6):

- Prepare the CTDPH Lead Inspection Report Form and submit to the CTDPH and Local Director of Health as applicable
- Post notice of toxic levels of lead at the dwelling unit in accordance with the CTDPH LPP&C regulations.
- Notify the residents of the dwelling units of the survey findings and include a summary report and information concerning lead prescribed by the CTDPH
- Notify the State of Connecticut Historical Commission of the need to abate lead hazards if the dwelling is greater than 50 years old
- Notify ConnDOT.

Report Preparation

Upon completion of the Site Inspection and Sampling, the Consultant shall prepare a report of their findings and conclusions. The report shall be prepared as described below.

TASK PRODUCTS:

Inspection Report

The inspection report shall include, but not be limited to, the following:

- Project Outline Page with Site Location, DOT Assignment #, DOT Project #, DOT Project Manager, Inspectors Names/Licenses #, Dates of Survey, Hazards Identified, Site Historic Significance, Children <6, Abatement Required, Cost Estimate, Additional Environmental Concern noted
- Tables of Survey Results (LBP measurements, dust and soil sample results)
- Site Photos
- Field Site Sketches
- Correspondence of Historical Status
- Inspector/Laboratory Licenses/Accreditation's
- Sample Chain of Custody and Analysis Sheets
- Itemized Cost Estimate for Abatement
- Related Notification Correspondence

BASIS OF PAYMENT:

A 710D assignment shall include all work required to prepare the report required under this Task and shall include but not necessarily be limited to effort required for the following:

- Project Management
- Meeting(s) with ConnDOT
- Review of existing information
- Field Investigation & Sampling
- Laboratory Analysis
- QA/QC
- Notifications
- Report Preparation

The base budget for this task shall depend upon the size of the structure to be investigated. The base budget shall be deemed to include all effort as described above for a project that involves a building structure encompassing up to 2,500 square feet. For each additional 2,500 square foot increment, a separate incremental budget shall be established to cover all costs associated with the additional effort. The total budget for a Task 710D assignment shall include the base budget plus the incremental budget times the number of additional 2,500 square foot increments included. This Basis of Payment shall apply for structures up to 10,000 square feet; for assignments on structures

over 10,000 square feet the fees shall be negotiated separately.

**TASK 720 – PROJECT DESIGN AND SPECIFICATION DEVELOPMENT
D – LEAD BASED PAINT HAZARDS AT RESIDENTIAL DWELLINGS**

OBJECTIVE:

The objective of a Task 720D is to develop plans, specifications and cost estimates for lead hazard abatement, either as stand alone documents or for inclusion in Contract Bid Documents, to reduce childhood lead poisoning.

TASK SCOPE:

Draft Abatement Review Plan

When lead hazards exist at a dwelling where children under the age of six (6) reside, the Consultant, utilizing a CTDPH certified lead planner-project designer, shall prepare preliminary a lead abatement plan to address the identified toxic defective lead based paint (LBP) and associated hazards (dust and soil) in accordance with the CTDPH LPP&C regulations. The design document shall include, but not be limited to, the following:

- Description of lead abatement work
- LBP abatement procedures
- Regulatory references
- Contractor bid qualifications
- Contractor submittals
- Worker protection and decontamination procedures
- Contractor/worker training and medical surveillance requirements
- Reoccupancy clearance criteria (dust wipe/soil/XRF)
- Waste stream sampling and classification (hazardous or non-hazardous)
- Transport and disposal of hazardous and non-hazardous waste
- Procurement of temporary hazardous waste generators EPA ID # from the Division of Environmental Compliance
- ConnDOT approved transport and disposal facilities
- Duration of tenant relocation
- Project Designer certifications
- Tables of XRF measurements
- Dust and soil sample results
- Field Site Sketches or CAD drawings

The Consultant shall contact ConnDOT approved disposal facilities, prior to listing any facilities in the specifications as possible disposal sites, to confirm the acceptance criteria for waste material at each facility in order to specify the proper testing procedures needed on the wastes and confirm that the waste material that is expected to be generated at the site will meet these criteria.

The Consultant shall coordinate the design and set up project meetings, as necessary, with all interested parties to discuss preliminary design requirements and resolve all outstanding items regarding the project.

The format for the lead abatement plan shall be submitted in Construction Standards Institute (CSI), Standard Specifications for Road Bridges and Incidental Construction 814A or 815, or as directed by the Engineer.

The package shall be submitted to ConnDOT, the Local Director of Health and the CT SHPO (if applicable) for review and comments.

TASK PRODUCTS:

Final Design (100%)

Based on the input from the review of the draft submittal design plan, a final abatement plan specification package shall be prepared which includes the Technical Specifications and Engineering Drawings. Formal written approval of the abatement plan must be secured from the Local Director of Health prior to the project start.

Prepare Cost Estimate and Schedule for Lead Abatement

The Consultant shall submit to ConnDOT a budget estimated cost for lead hazard abatement as well as the estimated cost to provide project compliance and project surveillance during lead hazard abatement activities in a format prescribed by ConnDOT.

BASIS OF PAYMENT:

A 720D assignment shall include all work required to prepare the report required under this Task and shall include but not necessarily be limited to effort required for the following:

- Project Management
- Meeting(s) with ConnDOT
- Review of existing information
- QA/QC
- Report Preparation
- CADD

The base budget for this task shall depend upon the size of the structure involved. The base budget shall be deemed to include all effort as described above for a project that involves a building structure encompassing up to 2,500 square feet. For each additional 2,500 square foot increment, a separate incremental budget shall be established to cover all costs associated with the additional effort. The total budget for a Task 720D assignment shall include the base budget plus the incremental budget times the number of additional 2,500 square foot increments included. This Basis of Payment shall apply for structures up to 10,000 square feet; for assignments on structures over 10,000 square feet the fees shall be negotiated separately.

**TASK 725 – OPERATIONS & MAINTENANCE (O&M) PLAN DEVELOPMENT
D – LEAD BASED PAINT HAZARDS AT RESIDENTIAL DWELLINGS**

OBJECTIVE:

The objective of a Task 725D is to develop a lead hazard management plan to allow for proper in-house management and hazard communication of lead based paint to remain in the dwelling, and prevent childhood lead poisoning.

TASK SCOPE:

Draft Lead Management Plan Review

When intact LBP and/or adequately covered lead-contaminated soil is/are to remain in place, the Consultant, utilizing a CTDPH certified lead planner-project designer, shall prepare a preliminary lead management plan in accordance with the CTDPH LPP&C regulations. Key provisions of the lead management plan shall include, but not be limited to, the following:

- An introduction with discussions of the initial investigations and any periodic surveillance
- A site description
- Procedures to be followed to maintain LBP surfaces and covered contaminated soil
- Discussions on renovation/demolition/maintenance activity
- Discussions on further abatement of new lead hazards
- A notification program to inform tenants and building occupants where the lead is located and how to avoid disturbing these areas
- A schedule for periodic inspections to record, assess and document any changes in condition to the intact LBP and/or adequately covered soil, as well as to collect additional dust wipes, soil samples and XRF measurements as deemed necessary by the inspector
- Tables to document any noted changes in conditions or additional sampling conducted
- A section on disclosure of lead hazards during real estate transactions and transfer of title regarding the lead management plan
- Attachments of LBP, soil and dust measurements taken, Field Site Sketches and the EPA Pamphlet on Protecting Tenants from Lead in Home

The package shall be submitted to ConnDOT for review and comments.

TASK PRODUCTS:

Final Lead Management Plan (100%)

Based on input from the review of the draft submittal lead management plan, a final lead management plan shall be prepared. A copy of the lead management plan shall be supplied to ConnDOT as well as the affected tenants of the dwelling.

BASIS OF PAYMENT:

A 725D assignment shall include all work required to prepare the report required under this Task and shall include but not necessarily be limited to effort required for the following:

- Project Management
- Meeting(s) with ConnDOT
- Review of existing information
- QA/QC
- Report Preparation
- CADD

The base budget for this task shall depend upon the size of the structure involved. The base budget shall be deemed to include all effort as described above for a project that involves a building structure encompassing up to 2,500 square feet. For each additional 2,500 square foot increment, a separate incremental budget shall be established to cover all costs associated with the additional effort. The total budget for a Task 725D assignment shall include the base budget plus the incremental budget times the number of additional 2,500 square foot increments included. This Basis of Payment shall apply for structures up to 10,000 square feet; for assignments on structures over 10,000 square feet the fees shall be negotiated separately.

TASK 726 – PERIODIC SURVEILLANCE
D – LEAD BASED PAINT HAZARDS AT RESIDENTIAL DWELLINGS

OBJECTIVE:

The objective of a Task 726D is to provide periodic on-site surveillance of intact lead based paint and adequately covered lead contaminated soil under management, assess the condition of the paint and soil, provide recommended response actions and update the existing lead management plan.

TASK SCOPE:

Site Inspection and Sampling

The Consultant, utilizing a CTDPH certified lead inspector or lead inspector risk assessor, shall perform a periodic inspection of the identified intact LBP and adequately covered lead-contaminated soil in the lead management plan. This inspection shall include a visual survey of the condition of the identified areas/components, and documentation of the findings.

The Consultant shall also perform dust wipe sampling in accordance with USEPA/HUD Risk Assessment protocols from within the dwelling unit. Dust wipe media shall meet the ASTM standard for sampling media.

The Consultant shall also collect additional XRF measurements, dust wipe and/or soil samples from areas deemed necessary by the lead inspector (i.e. new defective surfaces, surfaces not previously tested, previously inconclusive, etc.)

Where laboratory analytical services are required, the Consultant shall submit the collected samples to a laboratory accredited for such analysis. Required laboratory analytical services shall be secured by the Consultant from laboratories providing competitive pricing.

TASK PRODUCTS:

In addition to documenting field activity on the tables in the lead management plan, the Consultant shall also prepare a report for each periodic survey conducted which summarizes the findings, recommends response actions, summarizes changes required in the management plan and includes results of all new sampling.

The Consultant shall perform any and all notification activities necessary based on the periodic inspection findings in a manner similar to the notification requirements of Task 710D.

The Consultant shall formally update the lead management plan as the results of periodic inspections dictate and/or after any abatement activities found to be necessary are completed, and reissue the updated lead management plan to ConnDOT and the affected tenants.

BASIS OF PAYMENT:

A 726D assignment shall include all work required to prepare the report required under this Task and shall include but not necessarily be limited to effort required for the following:

- Project Management
- Meeting(s) with ConnDOT
- Review of existing information
- Field Investigation & Sampling
- Laboratory Analysis
- QA/QC
- Report Preparation

The base budget for this task shall depend upon the size of the structure involved. The base budget shall be deemed to include all effort as described above for a project that involves a building structure encompassing up to 2,500 square feet. For each additional 2,500 square foot increment, a separate incremental budget shall be established to cover all costs associated with the additional effort. The total budget for a Task 726D assignment shall include the base budget plus the incremental budget times the number of additional 2,500 square foot increments included. This Basis of Payment shall apply for structures up to 10,000 square feet; for assignments on structures over 10,000 square feet the fees shall be negotiated separately.

TASK 730 – PROJECT COMPLIANCE
D – LEAD BASED PAINT HAZARDS AT RESIDENTIAL DWELLINGS

OBJECTIVE:

The objective of a Task 730D is to provide project compliance administrative and technical services related to on-site lead hazard abatement activities.

TASK SCOPE:

Prebid Meeting and Walkthrough

After completion of the abatement plan specifications, the Consultant may solicit bids for the lead hazard abatement utilizing those Contractors awarded contracts under the CT DAS asbestos & lead abatement contract, or the Engineer may solicit competitive open bidding. The Consultant shall coordinate and attend the prebid meeting, explain the design specification and conduct a walkthrough. If bidders require information that cannot be clarified at the prebid meeting, Consultant shall develop an addendum which shall be sent to all bidders where applicable.

Contractor Qualification Review

The Consultant shall review the abatement contractors bid qualifications as identified in the specifications.

Contractor Abatement Award

The Consultant shall review the bids and make recommendations to ConnDOT. ConnDOT shall make the contract award.

Funding Requests

For projects where abatement is to be conducted by Contractors listed on the CT DAS asbestos & lead abatement contract, the Consultant shall submit to ConnDOT, funding requests for lead abatement as well as the project compliance and project surveillance required during the lead abatement activities in a format prescribed by ConnDOT. Requests for CT DAS Contractor funding shall be accompanied by a cost estimate supplied by the Contractor.

Review and Approval of Contractor Submittal

Prior to starting the lead abatement project, the Consultant shall review all materials submitted by the lead abatement contractor as required in the specifications. The submittals shall include, but are not limited to:

- Plan including schedule and manpower for addressing the lead hazards
- Approval permits for transport and disposal of hazardous and non-hazardous waste, including the EPA I.D. number obtained from the Division of Environmental Compliance

- All licenses, certifications, training, medical approval, blood test data, and respiratory fit test data for each supervisor and worker as well as the company

Laboratory Coordination

Assist in the selection of the laboratory and coordination for services. Review and recommend approval of laboratory invoices for payment. Evaluate and tabulate laboratory results and provide QA/QC on all laboratory involvement.

Technical Support of Field Personnel

Answer questions that arise in the field; interpret Contract Documents; resolve disputes between Owner/Contractor; provide support to field personnel.

Periodic Visits to the Site

Make visits to the work site to address critical work issues. All visits to the site will require documentation regarding the reasons/activities that occurred as part of the project monitors daily surveillance logs.

Tenant Relocation and Notification of Abatement Activity

The Consultant shall assist the Engineer in identifying suitable locations for temporary tenant relocation during abatement as necessary.

The Consultant shall notify, in writing, the tenants of each affected dwelling unit of the intended dates of abatement at least five (5) working days prior to the start of abatement in accordance with the CTDPH LPP&C regulations.

The Consultant shall notify the tenants of each affected dwelling unit upon receiving satisfactory reoccupancy clearance criteria following the abatement activity.

Invoice Review

The Consultant shall review contractor invoices for payment for concurrence with field records, contract rates and backup documentation. The Consultant shall resolve any invoice discrepancies with the contractor and prepare and submit necessary ConnDOT payment forms to the Department's Project Engineer for further processing and payment.

Report Preparation

Upon completion of the project activity, the Consultant shall prepare compliance reports based on their oversight. The report shall be prepared as described below.

TASK PRODUCTS:

Letter of Compliance

After the conclusion of abatement activity, and the receipt of satisfactory reinspection reoccupancy clearance criteria results, the Consultant shall issue a letter of compliance in accordance with the CTDPH LPP&C regulations to all applicable parties (CTDPH, local Director of Health, ConnDOT, Tenants), indicating the reasons lead abatement was undertaken, the Contractor who performed such services, the date of completion, and the need for any lead management plans.

Project Compliance Report

At the completion of the abatement project, the consultant shall prepare a documentation compliance package that shall provide ConnDOT with a complete set of records documenting all activities that took place at the site. This package shall be suitable for use by ConnDOT if future questions arise concerning the presence of LBP and associated hazards.

The completed documentation package shall include:

- Executive summary report of all activities
- Daily site logs
- A project outline with Site Location, DOT Project #, DOT Assignment #, DOT Project Manager, Dates of the project, Contractor name and license #, Consultant Project Monitors/Inspectors and licenses/accreditations, lists of materials abated, hazardous waste hauler, hazardous waste disposal facility, amount of hazardous waste generated and EPA ID#, amount of non-hazardous waste generated, amount of CT regulated waste generated, locations of remaining LBP
- Tenant letter of notification
- Health department abatement plan approval letter
- Sample chain of custody sheets and laboratory results for air, dust, soil, paint chip or waste stream samples
- Tables of any XRF measurements taken
- Sign-in sheets
- Abatement Contractor License
- Project Monitor certifications
- Contractor supervisor and worker training and medical records and licenses
- Contractor OSHA personnel air sample results
- Calibration records for testing equipment used
- Laboratory accreditations
- EPA hazardous waste I.D. #
- Waste disposal records/manifests
- All Contractor submittals
- Connecticut Historical Commission historic status determination
- Letter of Compliance

BASIS OF PAYMENT:

Task 730D – Project Compliance

A 730D assignment shall include all work required to provide administrative and technical support to the project and prepare the reports required under this Task and shall include but not necessarily be limited to effort required for the following:

- Project Management
- Meeting(s) with ConnDOT
- Coordination with field staff, Tenants, Contractor and Laboratories
- Site Visits
- QA/QC
- Report Preparation

The base budget for this task shall depend upon the size of the structure involved. The base budget shall be deemed to include all effort as described above for a project that involves a building structure encompassing up to 2,500 square feet. For each additional 2,500 square foot increment, a separate incremental budget shall be established to cover all costs associated with the additional effort. The total budget for a Task 730D assignment shall include the base budget plus the incremental budget times the number of additional 2,500 square foot increments included. This Basis of Payment shall apply for structures up to 10,000 square feet; for assignments on structures over 10,000 square feet the fees shall be negotiated separately.

TASK 740 – PROJECT SURVEILLANCE
D – LEAD BASED PAINT HAZARDS AT RESIDENTIAL DWELLINGS

OBJECTIVE:

The objective of a Task 740D is to provide an on-site project monitor/inspector to support the Engineer to ensure Contractor compliance with the plans, specifications and regulations when performing lead abatement.

TASK SCOPE:

Field Project Management

Consultant shall be the liaison to ConnDOT regarding field activities, coordinating and scheduling with Contractor, laboratories, CTDPH, CTDEP, OSHA, EPA.

Consultant shall perform daily field coordination with and oversight of the on-site Project Monitor.

Air Monitoring, Site Inspection and Project Oversight

The Consultant shall assign an inspector to provide construction administration, air sampling, dust wipe sampling, soil sampling, XRF testing, waste stream sampling and inspection services during the lead abatement project.

The inspector shall provide daily inspections of the work area to ensure that the lead abatement contractor is conducting the project in accordance with the specifications and all applicable regulations.

Daily project activities, as well as all observations made during the visual inspections shall be written down by the inspector in a permanent log book kept at the site. The inspector shall verify that a contractor maintains a daily sign-in sheet where all personnel performing work in the regulated area shall be required to sign in and out.

In addition to the daily inspection services, the inspector shall conduct daily air sampling. The number of samples to be collected shall depend upon what activities are taking place and the size of the project. The intent of the air sampling is to verify compliance with the OSHA Lead in Construction permissible exposure limits.

The inspector shall collect representative waste stream samples of all waste materials generated during the abatement project, and have these samples analyzed for all parameters necessary based upon the selected disposal facilities acceptance criteria. Prior to any waste leaving the site the inspector shall document that the waste is being removed in accordance with all applicable requirements, including obtaining a copy of all manifests from the Contractor/Waste Hauler and ensuring that the waste is manifested for the disposal facility identified. For hazardous waste leaving the site, the on-site project monitor shall sign off as an Agent for ConnDOT as the generator on the hazardous waste manifests.

Samples collected shall be submitted for analysis by the Consultant to laboratories appropriately accredited for such analysis. Required laboratory services shall be secured by the Consultant from laboratories providing competitive pricing. All sampling results (air, dust, soil, XRF) shall be logged by the inspector into the permanent log book on site.

The inspector shall remain on site throughout the duration of the project to ensure that the regulations are being strictly adhered to on a daily basis and all required abatement work is completed.

Following abatement, a CTDPH certified lead inspector or lead inspector risk assessor shall conduct a reinspection of each abatement area, which shall include, but not be limited to, the following:

- Visual inspection that all areas of abatement have been conducted following the lead abatement plan
- Visual inspection that all dust and debris in the abatement area has been cleaned and removed
- Clearance reoccupancy dust wipe sampling, in accordance with CTDPH LPP&C regulations
- Clearance soil sampling, if required, in accordance with the CTDPH LPP&C regulations
- Clearance XRF measurements on components which have undergone LBP removal in accordance with the CTDPH LPP&C regulations

In addition, the inspector shall conduct dust wipe, soil, air or XRF testing whenever deemed necessary.

BASIS OF PAYMENT:

Task 740D services shall be assigned on a per person-day basis. For the purposes of this Agreement, a person-day field assignment shall consist of 10 hours and a typical project shall require one project monitor. If project demands require extended workdays, the level of effort will reflect the additional time required.

TASK 750 – REGULATORY COMPLIANCE

OBJECTIVE:

The objective of a Task 750 assignment is to assist the Department with compliance with various regulations and guidelines, including but not limited to:

- Asbestos Containing Materials
- Lead Based Paint
- Hazardous Building Materials
- Underground and Aboveground Storage Tanks
- TSCA
- RCRA
- Indoor Air Quality
- Radon
- Mold
- Renovation/Demolition
- Well/Septic Abandonment

In addition, this task may be assigned to initiate an emergency response until such time as a scope can be developed under another task.

TASK SCOPE:

The services under this task shall include but not be limited to the following:

- Material Sampling/Testing
- Air Quality Sampling
- Environmental Consultation and Advice
- Training
- Expert Testimony

TASK PRODUCTS:

Products shall be determined by the Department on an assignment by assignment basis.

BASIS OF PAYMENT:

Regulatory Compliance Services shall be assigned on a weekly basis for each project..