The State of Connecticut

Department of Housing (DOH)

Community Development Block Grant Disaster Recovery Program (CDBG-DR)

Owner Occupied Rehabilitation and Rebuilding Program (OORR)

BID PACKAGE

For

Rehabilitation/Reconstruction work for:

Lorna Hewitt

54 Rainbow Road

Bridgeport, CT 06606

Prepared By:

Martinez Couch & Associates, LLC
1084 Cromwell Avenue Suite A-2
Rocky Hill, CT 06067
860-436-4364

Project #: 2240 – 54 Rainbow Road, Bridgeport, CT

EQUAL HOUSING OPPORTUNITY

Table of Contents

Section 1:

Advertisement for Bids 3

Information to Bidders 4

Bid Form 8

Form of Non-Collusive Affidavit 9

Bidders Certification of Eligibility 10

Certification of General Bidders on CDBG-DR Construction Projects 11

Certification of Sub Bidders on CDBG-DR Construction Projects 12

Performance and Payment Bond (*Contracts over $100,000 Only*) 13

Subcontractor Identification 14

Certification of Bidder Regarding Equal Employment Opportunity 15

Green Building Standards Checklist 16

Section 2:

General Conditions 20

Section 3: Specifications

DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS

SECTION 00 01 15 – LIST OF DRAWINGS 28

SECTION 00 31 26 – EXISTING HAZARDOUS MATERIAL INFORMATION 29

DIVISION 01 – GENERAL REQUIRMENTS

SECTION 01 00 00 – GENERAL CONDITIONS 74

SECTION 01 33 00 – SUBMITTAL PROCEDURES 77

SECTION 01 50 00 – TEMPORARY FACILITIE 86

SECTION 01 77 00 – CLOSEOUT PROCEDURES 97

DIVISION 02 – EXISTING CONDITIONS

SECTION 02 41 19 – SELECTIVE DEMOLITION 100

SECTION 02 82 13 – ASBESTOS ABATEMENT 103

SECTION 02 83 13 – LEAD HAZARD REMEDIATION 146

SECTION 02 85 00 – MOLD REMEDIATION 153

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

SECTION 07 31 00 – ALPHALT SHINGLES 154

SECTION 07 71 23 – GUTTERS 159

DIVISION 08 – OPENINGS

SECTION 08 31 13 – ACCESS DOORS 162

DIVISION 09 – FINISHES

SECTION 09 29 00 – GYPSUM BOARD 165

SECTION 09 90 00 – PAINTINGS COATINGS 169

DIVISION 33 – UTILITIES

SECTION 33 21 13 – RADON MITIGATION 174

Section 1

ADVERTISEMENT FOR BIDS

Project #2240 – 54 Rainbow Road, Bridgeport, CT

The State of Connecticut Department of Housing (DOH) is seeking proposals through a Request for Proposal (RFP) process for the rehabilitation, reconstruction and/or mitigation of residential structures damaged by Superstorm Sandy in compliance with all applicable local, federal, and state statutory requirements with special attention paid to requirements for Community Development Block Grants under the United States Department of Housing and Urban Development ("HUD") Disaster Recovery grant program.

Separated sealed bids for 2240 – 54 Rainbow Road, Bridgeport, CT will be received by Martinez, Couch and Associates, LLC. until 5 o'clock PM on July, 18, 2014.

The Information to Bidders, Form of Bid, Form of Contract, Plans, Specifications, and Form of Bid Bond, Performance and Payment Bond or Security, and other contract documents may be examined on the Department of Housing Hurricane Sandy Recover website at www.ct.gov/doh/ and click on the "Hurricane Sandy" link.

Copies of plans may be downloaded directly from the Department of Housing website under bid notices or obtained at the office of Martinez, Couch and Associates, LLC. located at 1084 Cromwell Avenue, Suite 2 Rocky Hill, CT 06067 upon payment of $50.00 for each set. Requests for copies plans shall provide 2 days notice to Martinez, Couch and Associates, LLC.

DOH reserves the right to waive any informalities or to reject any or all bids.

Attention to bidders is particularly called to the requirements as to conditions of employment to be observed and minimum wages rates to be paid under the contract (if applicable), Section 3, Segregated Facilities, Section 109 and E. O. 11246.

No bidder may withdraw his bid within 30 calendar days after the actual date of the bid opening thereof.

INFORMATION FOR BIDDERS

Receipt and Opening of Bids:

The State of Connecticut Department of Housing (herein called the "DOH"), invites bids on the form attached. Bids will be received by DOH at the office of Martinez, Couch and Associates, LLC. until 5 o'clock PM on July, 18, 2014.

The envelopes containing the bids must be sealed, addressed to Mr. Richard Couch, P.E. at Martinez, Couch and Associates, LLC. and designated as bid for 2240 – 54 Rainbow Road, Bridgeport, CT.

DOH may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement there considered. NO bidder may withdraw a bid within 30 days after the actual date of the opening thereof.

Mandatory Walk Through: All bidders must attend a mandatory walk through of the property designated above. The date and time of the walk through is set for 3:30 o'clock PM on July 2, 2014.

Preparation of Bids:

Each bid must be submitted on the prescribed form and accompanied by Certification by Bidder Regarding Equal Employment Opportunity, Form HUD-950.1, and Certification of Bidder Regarding Section 3 and Segregated Facilities. All blank spaces for bid process must be filled in, in ink or typewritten, in both words and figures, and the foregoing Certifications must be fully completed and executed when submitted.

Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, his/her address, and the name of the project for which the bid is submitted. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified in the bid form.

Subcontracts: The bidder is specifically advised that any person, for, or other party to whom it is proposed to award a subcontract under this contract:

1. Must be acceptable to the DOH after verification by the State of the current eligibility status; and,
2. Must submit Form HUD-950.2, Certification by Proposed Subcontractor Regarding Equal Employment Opportunity and Certification of Proposed Subcontractor Regarding Section 3 and Segregated Facilities. Approval of the proposed subcontractor award cannot be given by the DOH unless and until the proposed subcontractor has submitted the Certifications and/or other evidence showing that it has fully complied with any reporting requirements to which it is or was subject. Although the bidder is not required to attach such Certifications by proposed subcontractors to his/her bid, the bidder is here advised of this requirement so that appropriate action can be taken to prevent subsequent delay in subcontract awards.

Method of Bidding: DOH invites the following bid(s):

Qualifications of Bidder: The DOH may make such investigations as he/she deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the DOH all such information and date for this purpose as the DOH may request. The DOH reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the DOH that such bidder is property qualified to carry out the obligations of the contract and to complete the work contemplated therein. Conditional bids will not be accepted.

The State's set Contractor Prequalifications are available at the Department of Housing's Hurricane Sandy Recovers website www.ct.gov/doh/ and click on the "Hurricane Sandy" link.

Conditions of Work: Each bidder must inform him/herself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his/her obligation to furnish all material and labor necessary to carry out the provision of his/her contract. Insofar as possible the contractor, in carrying out the work, must employ such methods or means as will not cause any interruption of or interference with the work of any other contractor.

Addenda and Interpretations: No interpretation of the meaning of the plans, specifications or other pre-bid documents will be made to any bidder orally.

Every request for such interpretation should be in writing addressed to: Martinez, Couch and Associates, LLC. at 1084 Cromwell Avenue, Suite 2 Rocky Hill, CT 06067 and, to be given consideration, must be received at least five days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instruction will be in the form of written addenda to the specifications which, if issued, will be forwarded by electronic mail and posted on DOH's Hurricane Sandy website to all prospective bidders (at the respective email addresses furnished for such purposes), not later than three days prior to the date fixed for the opening of bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his/her bid as submitted. All addenda so issued shall become part of the contract documents.

Performance and Payment Bonds: A performance and payment bond will be required of the successful bidder (contractor) for 100 percent of the contract price on contracts over $100,000.

Notice of Special Conditions: Attention is particularly called to those parts of the contract documents and specifications which deal with the following:

1. Inspection and testing of materials
2. Insurance requirements
3. Wage rates (if applicable)
4. State allowances

Laws and Regulations: The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full.

Method of Award-Lowest Qualified Bidder: If at the time this contract is to be awarded, the lowest base bid submitted by a responsible bidder does not exceed the amount of funds then estimated by the DOH as available to finance the contract; the contract will be awarded on the base bid only. If such bid exceeds such amount, the DOH may reject all bids or may award the contract on the base bid combined with such deductible alternatives applied in numerical order in which they are listed in the Form of Bids, as produces a net amount which is within the available funds.

If the homeowner wishes to select a prequalified bidding contractor other than the lowest and most responsible bidder, said owner is responsible for paying the difference between the lowest bidder and their chosen bidder from their own financing.

Obligation of Bidder: At the time of the opening of bids, each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and contract documents (including all addenda). The failure or omission of any bidder to examine any form, instrument or document shall in no way relieve any bidder from any obligation in respect of his/her bid.

Safety Standards and Accident Prevention: With respect to all work performed under this contract, the contractor shall:

1. Comply with the safety standards provision of applicable laws, building and construction codes and the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, the requirements of the Occupational Safety and Health Act of 1970 (Public Law 91-596), and the requirements of Title 29 of the Code of Federal Regulations, Section 1518 as published in the "Federal Register," Volume 36, No 75, Saturday, April 17, 1971.
2. Exercise every precaution at all times for the prevention of accidents and the protection of persons (including employees) who may be injured on the job site before the employer has made a standing arrangement for removal of injured persons to a hospital or a doctor's care.

Contract Progress Schedule: Each bid shall be accompanied by a Contract Progress Schedule. Such Schedule shall list the bidder's timetable for completion of the contract.

BID FORM

The undersigned, being familiarized with the local conditions affecting the cost of the work and with the Drawings, Scope of Work, Specifications, Invitation to Bidders, Instructions to Bidders, General Conditions, Bid Form, Form of Contract and Form of Bonds for Project No. 2240 – 54 Rainbow Road, Bridgeport, CT and Addenda No. and _____ thereto, as prepared by Martinez Couch and Associates, LLC, Rocky Hill Connecticut, and on file in the office of DOH, hereby proposes to provide all work as required for the rehabilitation and reconstruction for said Project No. 2240 – 54 Rainbow Road, Bridgeport, CT located at 54 Rainbow Road in Bridgeport, State of Connecticut, all in accordance with the Drawings and Specifications, for the sum of :
_____Dollars ($_____).

Section #	***Scope of Work***	***Subcontractor***	***Cost***	
			$ / Per	***Total ($)***
01 00 00	General Conditions		/L.S.	
01 50 00	Temporary Facilities		/L.S.	
02 82 12	Asbestos Abatement		/L.S.	
02 83 13	Lead Hazard Remediation		/L.S.	
02 85 00	Mold Remediation		/L.S.	
07 31 00	Asphalt Shingles		/L.S.	
07 71 23	Gutters		/L.F.	
08 31 13	Access Doors		/L.S.	
09 29 00	Gypsum Board		/S.F.	
09 90 00	Paintings and Coatings		/S.F.	
TOTAL COST				

Unit Prices - For Unforeseen Conditions During Repairs

All unit prices, unless otherwise noted, shall include all incidental work normally required in connection with the particular type of work involved and would include, but not necessarily be limited to costs of materials, material accessories, material waste, fabrication, labor, supervision, engineering, layout, transportation, rigging, insurances, overhead, and profit. All labor rates, unless otherwise noted, shall include, but not necessarily be limited to all fringe benefits, insurances, overhead, and profit.

Item	***Rate ($/Per)***
Carpenter Labor Rate	/H.R.
Roofer Labor Rate	/H.R.

The undersigned agrees that if within the period of thirty (30) days after the opening of bids, or when extended to the next work day immediately following said period, notice of the acceptance of this bid shall be mailed, or delivered to him/her at the business address given below, or at any time thereafter before this bid is withdrawn, will within fifteen (15) days thereafter deliver to the DOH, where directed, a contract properly executed in such number of counterparts as may be required by said DOH, on the forms annexed, with such changes therein as shall have been made by DOH, prior to the time named for delivery of this proposal, together with an executed Completion Assurance Agreement with a Letter of Credit in a form satisfactory to the DOH and a letter indicating those

FORM OF NON-COLLUSIVE AFFIDAVIT

AFFIDAVIT

State of _____)

County of _____)

_____, being first duly sworn, deposes and says:

That he/she is,_____ the party making the foregoing proposal for bid, that such proposal or bid is genuine and not collusive or sham; that said bidder has not colluded, conspired, connived or agreed, directly or indirectly, with any bidder or person, to put in a sham bid or to refrain from bidding, and has not, in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference, with any person, to fix the bid price of affiant or of any other bidder, or to fix any overhead, profit or cost element of said bid price, or of that of any other bidder, or to secure any advantage against DOH or any person interested in the proposed contract, and that all statements in said proposal for bid are true.

Project No._____

Location _____

_____

Signature

_____

Name and Title

_____

Date

(Signature should be notarized.)

BIDDER'S CERTIFICATION OF ELIGIBILITY

By the submission of this bid, the bidder certifies that to the best of its knowledge and belief, neither it, nor any person or firm which has an interest in the bidder's firm, nor any of the bidder's subcontractors, is ineligible to:

(1) Be awarded contracts by any agency of the United States Government or HUD; or,

(2) Participate in HUD programs pursuant to 24 CFR part 24.

_____

(Name of Bidder)

_____

(Address)

BY:_____

Title: _____

NOTE: This certification is a material representation of fact upon which reliance is placed when making award. If it is later determined that the bidder knowingly rendered an erroneous certification, the contract may be terminated for default, and the bidder may be debarred or suspended from participation in HUD programs and other Federal programs.

CERTIFICATION OF GENERAL BIDDERS ON CDBG-DR CONSTRUCTION PROJECTS

I. CERTIFICATION REGARDING HEALTH AND SAFETY

The undersigned hereby certifies that he/she is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work; that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least ten hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee

II. CERTIFICATION REGARDING NON-COLLUSION AND DEBARMENT

The undersigned further certifies under the penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this subsection the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity. The undersigned further certifies that neither he/she nor any firm, corporation, partnership or association in which he/she has a substantial interest is designated as an ineligible contractor by the Comptroller General of the United States pursuant to Section 5.6 (b) of the Regulations of the Secretary of Labor, Part 5 (29 CFR, Part 5), or pursuant to Section 3 (a) of the Davis-Bacon Act, as amended (40 USC 276a). The undersigned further certifies that said undersigned is not presently debarred from doing public construction work in the State of Connecticut.

Date: _____

_____

Name of General Bidder

By _____

Signature

_____

Print name and title

_____

Business Address

_____

Street Address City and State

OSHA-10 OSHA-10

CERTIFICATION OF SUB- BIDDERS (IF ANY) ON CDBG-DR CONSTRUCTION PROJECTS

I. CERTIFICATION REGARDING HEALTH AND SAFETY

The undersigned hereby certifies that he/she is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work; that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least ten hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee

II. CERTIFICATION REGARDING NON-COLLUSION AND DEBARMENT

The undersigned further certifies under penalties of perjury that this subbid is in all responses bona fide, fair and made without collusion or fraud with any other person. As used in this subsection the "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity. The undersigned further certifies that neither he/she nor any firm, corporation, partnership or association in which he/she has a substantial interest is designated as an ineligible contractor by the Comptroller General of the United States pursuant to Section 5.6 (b) of the Regulations of the Secretary of Labor, Part 5 (29 CFR, Part 5), or pursuant to Section 3 (a) of the Davis-Bacon Act, as amended (40 USC 276a). The undersigned further certifies that said undersigned is not presently debarred from doing public construction work in the State of Connecticut.

Date _____

_____

Name of Sub-bidder

By _____

Signature

_____

Print Name and Title

_____

Business Name

_____

Street Address, City and State

PERFORMANCE AND PAYMENT BOND

(For contracts over $100,000)

KNOW ALL MEN BY THESE PRESENTS: THAT we, _____, as PRINCIPAL, and_____ , as SURETY, are held firmly bound unto_____ hereinafter called the DOH, in the penal sum of _____ ($_____), for the payment of which sum we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally.
WHEREAS, Principal has entered into a certain Contract with DOH, dated _____, a copy of which is hereto attached and made a part hereof.

NOW, THEREFORE, the condition of this obligation is such that if the Principal shall in all respects fully perform the Contract and all duly authorized modifications thereof, during its original term and any extensions thereof that may be granted and during any guaranty period for which the Contract provides, and if the Principal shall fully satisfy all claims arising out of the prosecution of the work under the Contract and shall fully indemnify DOH for all expenses which it may incur by reason of such claims, including its attorney's fees and court costs, and if the Principal shall make full payment to all persons supplying labor, services, materials, or equipment in the prosecution of the work under the Contract, in default of which such persons shall have a direct right of action hereupon; and if the Principal shall pay or cause to be paid all sales and use taxes payable as a result of the performance of the Contract as well as payment of gasoline and special motor fuel taxes in the performance of the Contract and all motor vehicle fees required for commercial motor vehicles used in connection with the performance of the Contract, then this obligation shall be void; otherwise, it shall remain in full force and effect. No modification of the Contract or extension of the term thereof, nor any forbearance on the part of DOH shall in any way release the Principal or the Surety from liability hereunder. Notice to the Surety of any such modification, extension, or forbearance is hereby waived.

IN WITNESS WHEREOF, the aforesaid Principal and Surety have executed this instrument and affixed their seals hereto, this _____ day of _____.

_____ _____

Principal Surety

_____ _____

Name and Title

(Signatures must be notarized.)

(Power-of-Attorney for person signing for Surety Company must be attached to bond.)

The rate of premium on this bond is $_____ per thousand.

The total amount of premium charge is $_____.

(The above is to be filled in by Surety Company.)

SUBCONTRACTOR IDENTIFICATION

(Provide additional forms for more subcontractors, as needed prior to contract execution.)

This form is a part of your bid package and must be submitted along with the itemized and formal bid forms at the time of the bid opening. Failure to submit a completed document could result in the disqualification of your bid.

Name of Subcontractor: _____

Address: _____
Trade: _____
Hourly Wage: _$_____ Full Contract Price: _$_____
Federal Tax# or SSN #: _____
Male Owned Business _____ Female Owned Business_____
Is he/she of Hispanic or Latino ethnicity? Yes_____ No_____
Race: (Please check one)
____White ____American Indian/Alaskan Native
____Black/African American ____Hasidic Jew
____Asian/Pacific American

Name of Subcontractor: _____
Address: _____
Trade: _____
Hourly Wage: _$_____ Full Contract Price: _$_____
Federal Tax# or SSN #: _____
Male Owned Business _____ Female Owned Business_____
Is he/she of Hispanic or Latino ethnicity? Yes_____ No_____
Race: (Please check one)
____White ____American Indian/Alaskan Native
____Black/African American ____Hasidic Jew
____Asian/Pacific American

Name of Subcontractor: _____
Address: _____
Trade: _____
Hourly Wage: _$_____ Full Contract Price: _$_____
Federal Tax# or SSN #: _____
Male Owned Business _____ Female Owned Business_____
Is he/she of Hispanic or Latino ethnicity? Yes_____ No_____
Race: (Please check one)
____White ____American Indian/Alaskan Native
____Black/African American ____Hasidic Jew
____Asian/Pacific American

_____ _____
Contractor's Signature Date

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

CERTIFICATION OF BIDDER REGARDING EQUAL EMPLOYMENT OPPORTUNITY

INSTRUCTIONS

This certification is required pursuant to Executive Order 11246 (30 F R 12319-25). The implementing rules and regulations provide that any bidder or prospective contractor, or any of their proposed subcontractors shall state as an initial part of the bid or negotiations of the contract whether it has participated in any previous contract or subcontract subject to the equal opportunity clause; and, if so, whether it has filed all compliance reports due under applicable instructions.

Where the certification indicates that the bidder has not filed a compliance report due under applicable instructions, such bidder shall be required to submit a compliance report within seven calendar days after bid opening. No contract shall be awarded unless such report is submitted.

CERTIFICATION OF BIDDER

Name and address of Bidder (include zip code)

_____

_____

_____

1. Bidder has participated in a previous contract or subcontract subject to the Equal Opportunity Clause.
   ( ) YES ( ) NO

2. Compliance reports were required to be filed in connection with such contract or subcontract.
   ( ) YES ( ) NO

3. Bidder has filed all compliance reports due under applicable instructions, including SF.100.
   ( ) YES ( ) NO ( ) NOT REQUIRED

4. Have you ever seen or are you being considered for sanction due to violation of Executive Order 11246, as amended?
   ( ) YES ( ) NO

5. No segregated facilities will be maintained.

NAME AND TITLE OF SIGNER (Please type.)

_____

_____ _____

SIGNATURE DATE

Green Building Standards Checklist

HUD CPD Green Building Retrofit Checklist

The CPD Green Retrofit Checklist promotes energy efficiency and green building practices for residential retrofit projects. Grantees must follow the checklist in its entirety and apply all measures within the Checklist to the extent applicable to the particular building type being retrofitted. The phrase "when replacing" in the Checklist refers to the mandatory replacement with specified green improvements, products, and fixtures only when replacing those systems during the normal course of the retrofit.

WATER AND ENERGY CONSERVATION MEASURES

N/A **Water-Conserving Fixtures**
Install or retrofit water conserving fixtures in any unit and common facility, use the following specifications: Toilets-- 1.28 gpf; Urinals-- 0.5 gpf; Showerheads-- 2.0 gpm; Kitchen faucets-- 2.0 gpm; and Bathroom faucets-- 1.5gpm. [gpf = gallons per flush; gpm = gallons per minute]

N/A **ENERGY STAR Appliances**
Install ENERGY STAR-labeled clothes washers, dishwashers, and refrigerators, if these appliance categories are provided in units or common areas.

N/A **Air Sealing: Building Envelope**
Seal all accessible gaps and penetrations in the building envelope. If applicable, use low VOC caulk or foam.

X **Insulation: Attic** (if applicable to building type)
For attics with closed floor cavities directly above the conditioned space, blow in insulation per manufacturer's specifications to a minimum density of 3.5 Lbs. per cubic foot (CF). For attics with open floor cavities directly above the conditioned space, install insulation to meet or exceed IECC levels.

N/A **Insulation: Flooring** (if applicable to building type)
Install ≥ R-19 insulation in contact with the subfloor in buildings with floor systems over vented crawl spaces. Install a 6-mil vapor barrier in contact with 100% of the floor of the crawl space (the ground), overlapping seams and piers at least 6 inches.

N/A **Duct Sealing** (if applicable to building type)
In buildings with ducted forced-air heating and cooling systems, seal all penetrations of the air distribution system to reduce leakage in order to meet or exceed ENERGY STAR for Homes' duct leakage standard.

N/A **Air Barrier System**
Ensure continuous unbroken air barrier surrounding all conditioned space and dwelling units. Align insulation completely and continuously with the air barrier.

N/A **Radiant Barriers: Roofing**
When replacing or making a substantial repair to the roof, use radiant barrier sheathing or other radiant barrier material; if economically feasible, also use cool roofing materials.

N/A

Windows
When replacing windows, install geographically appropriate ENERGY STAR rated windows.

N/A

Sizing of Heating and Cooling Equipment
When replacing, size heating and cooling equipment in accordance with the Air Conditioning Contractors of America (ACCA) Manuals, Parts J and S, or 2012 ASHRAE Handbook--HVAC Systems and Equipment or most recent edition.

N/A

Domestic Hot Water Systems
When replacing domestic water heating system(s), ensure the system(s) meet or exceed the efficiency requirements of ENERGY STAR for Homes' Reference Design. Insulate pipes by at least R-4.

X

Efficient Lighting: Interior Units
Follow the guidance appropriate for the project type: install the ENERGY STAR Advanced Lighting Package (ALP); ***OR*** follow the ENERGY STAR MFHR program guidelines, which require that 80% of installed lighting fixtures within units must be ENERGY STAR-qualified or have ENERGY STAR-qualified lamps installed; ***OR*** when replacing, new fixtures and ceiling fans must meet or exceed ENERGY STAR efficiency levels.

X

Efficient Lighting: Common Areas and Emergency Lighting (if applicable to building type)
Follow the guidance appropriate for the project type: use ENERGY STAR-labeled fixtures or any equivalent high-performance lighting fixtures and bulbs in all common areas; ***OR*** when replacing, new common space and emergency lighting fixtures must meet or exceed ENERGY STAR efficiency levels. For emergency lighting, if installing new or replacing, all exist signs shall meet or exceed LED efficiency levels and conform to local building codes.

N/A

Efficient Lighting: Exterior
Follow the guidance appropriate for the project type: install ENERGY STAR-qualified fixtures or LEDs with a minimum efficacy of 45 lumens/watt; ***OR*** follow the ENERGY STAR MFHR program guidelines, which require that 80% of outdoor lighting fixtures must be ENERGY STAR-qualified or have ENERGY STAR-qualified lamps installed; ***OR*** when replacing, install ENERGY STAR compact fluorescents or LEDs with a minimum efficacy of 45 lumens/watt.

INDOOR AIR QUALITY

N/A

Air Ventilation: Single Family and Multifamily (three stories or fewer)
Install an in-unit ventilation system capable of providing adequate fresh air per ASHRAE 62.2 requirements.

N/A

Air Ventilation: Multifamily (four stories or more)
Install apartment ventilation systems that satisfy ASHRAE 62.2 for all dwelling units and common area ventilation systems that satisfy ASHRAE 62.1 requirements. If economically feasible, consider heat/energy recovery for 100% of corridor air supply.

N/A

Composite Wood Products that Emit Low/No Formaldehyde

Composite wood products must be certified compliant with California 93120. If using a composite wood product that does not comply with California 93120, all exposed edges and sides must be sealed with low-VOC sealants.

N/A **Environmentally Preferable Flooring**
When replacing flooring, use environmentally preferable flooring, including the FloorScore certification. Any carpet products used must meet the Carpet and Rug Institute's Green Label or Green Label Plus certification for carpet, pad, and carpet adhesives.

X **Low/No VOC Paints and Primers**
All interior paints and primers must be less than or equal to the following VOC levels: Flats--50 g/L; Non-flats--50 g/L; Floor--100 g/L. [g/L = grams per liter; levels are based on a combination of the Master Painters Institute (MPI) and GreenSeal standards.]

X **Low/No VOC Adhesives and Sealants**
All adhesives must comply with Rule 1168 of the South Coast Air Quality Management District. All caulks and sealants must comply with regulation 8, rule 51, of the Bay Area Air Quality Management District.

N/A **Clothes Dryer Exhaust**
Vent clothes dryers directly to the outdoors using rigid-type duct work.

X **Mold Inspection and Remediation**
Inspect the interior and exterior of the building for evidence of moisture problems. Document the extent and location of the problems, and implement the proposed repairs according to the Moisture section of the EPA Healthy Indoor Environment Protocols for Home Energy Upgrades.

N/A **Combustion Equipment**
When installing new space and water-heating equipment, specify power-vented or direct vent combustion equipment.

N/A **Mold Prevention: Water Heaters**
Provide adequate drainage for water heaters that includes drains or catch pans with drains piped to the exterior of the dwelling.

X **Mold Prevention: Surfaces**
When replacing or repairing bathrooms, kitchens, and laundry rooms, use materials that have durable, cleanable surfaces.

N/A **Mold Prevention: Tub and Shower Enclosures**
When replacing or repairing tub and/or shower enclosures, use non-paper-faced backing materials such as cement board, fiber cement board, or equivalent in bathrooms.

N/A **Integrated Pest Management**
Seal all wall, floor, and joint penetrations with low-VOC caulking or other appropriate sealing methods to prevent pest entry. [If applicable, provide training to multifamily buildings staff.]

X **Lead-Safe Work Practices**

For properties built before 1978, if the project will involve disturbing painted surfaces or cleaning up lead contaminated dust or soil, use certified renovation or lead abatement contractors and workers using lead-safe work practices and clearance examinations consistent with the more stringent of EPA's Renovation, Repair, and Painting Rule and HUD's Lead Safe Housing Rule.

X **Radon Testing and Mitigation** (if applicable based on building location)
For buildings in EPA Radon Zone 1 or 2, test for radon using the current edition of American Association of Radon Scientists and Technologists (AARST)'s Protocols for Radon Measurement in Homes Standard for Single-Family Housing or Duplexes, or AARST's Protocol for Conducting Radon and Radon Decay Product Measurements in Multifamily Buildings. To install radon mitigation systems in buildings with radon level of 4 pCi/L or more, use ASTM E 2121 for single-family housing or duplexes, or AARST's Radon Mitigation Standards for Multifamily Buildings. For new construction, use AARST's Reducing Radon in New Construction of 1 & 2 Family Dwellings and Townhouses, or ASTM E 1465.

Section 2

General Conditions

1. The purpose of this HUD and DOH sponsored 0% interest loan Owner Occupied Rehabilitation and Rebuilding program is to make good faith efforts to assist qualified property owners in making repairs to their property damaged by Superstorm Sandy. Eligible repairs include code, health and safety compliance modifications, including but not limited to building envelope and energy efficiency upgrades (See Green Building Standards).
2. In the event that the homeowner is dissatisfied with the work performed although the work has been completed to industry standards, approved by the local municipality's code enforcement officials and approved by the DOH or its agent, the homeowner's approval will be overridden, full payment will be issued to the contractor and the project will be officially closed.
3. The owner is responsible for removal or relocation from the respective work areas the following, including but not necessarily limited to: personal belongings, window treatments, small furniture, fixtures, area carpets, interior and exterior plants. The contractor will be responsible for covering and protecting large furniture unable to be removed from the respective work areas.
4. The Contractor, unless otherwise specified, shall provide all labor, materials, tools, equipment, and related items required for the erection and completion of all work indicated in this project manual and as may be inferred, implied or otherwise necessary for the proper execution of the work.
5. The Contractor shall pay all necessary taxes, fees, and permits necessary to complete all of his work as detailed on the attached scope of work.
6. The premises herein shall be occupied during the course of the construction work.
7. All rehabilitation, alterations, repairs, or extensions shall be in compliance with all applicable codes of the Municipality, HUD requirements or compliance with the latest edition of the International Building Code, which ever applies and is the more strict. All electrical, heating, and plumbing work shall comply with the rules and regulations of the National, State and Local Codes. Before commencing work, contractors and/or subcontractors shall obtain all necessary permits.
8. The Contractor certifies that he has familiarized himself with the requirements of the specifications and plans and understands the extent and character of the work to be done, and inspected the premises and given his full attention to any and all areas with which he might become specifically involved. He must familiarize himself with all conditions relating to and affecting his work and bid.
9. The selected Contractor must, prior to contract signing, supply the DOH and the Owner with the original certificates of insurance in accordance with the following insurance requirements:
   A. Contractor shall procure and maintain for the duration of the Agreement the following types of insurance, in amounts no less than the stated limits, against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder.
      1) Workers' Compensation Insurance: The Contractor shall maintain full and complete Workers' Compensation Insurance for all of its employees and those of its subcontractors engaged in work on the premises, in accordance with the local and state laws governing the same, in the minimum amounts of $100,000 each accident, $500,000 disease – Policy limit, $100,000 disease – each employee.
      2) General Liability Insurance: The Contractor shall furnish evidence of a comprehensive general liability insurance coverage with a combined single limit for bodily injury, death, and property damage in the amount of $1,000,000 per occurrence, naming the Owner and the State as additional insured. This shall cover the use of all equipment, hoists and vehicles on the Premises not covered by any automobile liability policy. If the Contractor has a "claims-made" policy, then the following additional requirements apply: (a) the policy must provide a retroactive date which must be on or before the

execution date of this Agreement and (b) the extended reporting period may not be less than five (5) years following the Construction Completion Date.

3) Automobile Liability: The Contractor shall furnish evidence of Automobile Liability insurance with minimum limits of $1,000,000 per occurrence, combined single limit for bodily injury and property damage liability. This shall include owned vehicles, non-owned vehicles and employee non-ownership.
4) Cargo Insurance: ~~The Contractor shall furnish evidence of all-risk cargo insurance, with a minimum limit of $ per occurrence when the project involves raising a structure above the Base Flood Elevation~~.
5) Builders Risk: The Contractor shall maintain Builder's Risk (fire and extended coverage) insurance providing coverage for the entire work at the project site, including all work in place, all materials stored at the building site, foundations and building equipment. Coverage shall be on a completed value form basis in an amount equal to the projected value of the project. The Contractor agrees to endorse the State of Connecticut and the Owner as Loss Payees.

B. Additional Insurance Provisions

1) Each of the Owner and the State of Connecticut Department of Housing, and their successors and assigns, as their interests may appear, shall be named as an Additional Insured on the Commercial General Liability policy.
2) Described insurance shall be primary coverage and Applicant and Applicant's insurer shall have no right of subrogation recovery or subrogation against the State of Connecticut.
3) Applicant shall assume any and all deductibles in the described insurance policies.
4) Without limiting Applicant's obligation to procure and maintain insurance for the duration identified in (A) above, each insurance policy shall not be suspended, voided, cancelled or reduced except after thirty (30) days prior written notice by certified mail has been given to the State of Connecticut, with the exception that a ten (10) day prior written notice by certified mail for non-payment of premium is acceptable.
5) Each policy shall be issued by an Insurance Company licensed to do business by Connecticut Department of Insurance and having a minimum Best Rating of A- or equivalent or as otherwise approved by the State.

10. DOH and its agents must be notified prior to start of work of any subcontractor to be paid for work on the job who is different from the subcontractor identified in original bid proposal.
11. Working times for the project shall be Monday through Friday 8 am to 5 pm (EST). Contractors must request permission from owner and be in compliance with local municipal ordinances prior to working longer hours or weekends.
12. All materials shall be new and of acceptable quality. The Contractor shall submit proof of purchase of warrantee items at closeout. The property Owner shall select all colors, models, etc. as per scope of work. All materials and work must be applied in accordance with the applicable manufacturer's latest instructions and specifications, and in accordance with Federal prohibitions against the use of lead paint.
13. All manufacturers' warranties are to be extended to the property Owner free and clear of all liens. Unless otherwise specified, all labor, material, and workmanship provided by the Contractor shall be guaranteed by the Contractor, including that of subcontractors, for a one (1) year period from the date of the Final Payment. This guarantee shall be in addition to and not in limitation of, in lieu of, or modify and other guarantee that is due the property Owner from any manufacturer.
14. The Contractor shall repair or replace all work, materials and equipment which are found to be defective during construction and the guarantee period. Repair shall include all damage to surrounding work caused by the failure and/or necessary for the repair or replacement of the defect. All repairs and replacements shall be performed at no additional expense to the Owner and shall be completed promptly after the Contractor receives notice of the defect.

15. The Contractor shall take all necessary measures and precautions to protect the surroundings from damage occurring due to performance of the work. All areas and surfaces of the existing building which are affected by the execution of the new work (removals, demolition, repairs etc.) shall be patched and restored to either match the existing adjacent conditions or to match the new work, whichever is applicable. If such damage occurs it will be repaired by the Contractor at no cost to the Owner. Contractor shall provide all temporary shoring, bracing and other construction (interior and exterior) required to perform the work of this contract.
16. The Contractor shall dispose of all debris and remove all material resulting from his work in accordance with local and State law. The Contractor shall police and maintain a clean and safe job site daily. He shall reinstall accessories taken down and clean up all scrap around the project and remove fingerprints. All on-site maintenance relating to the performance of the work shall be the responsibility of the Contractor until the Certificate of Completion is issued. The project shall be maintained in a habitable and safe condition daily if the project is to remain occupied.
17. Materials and products not otherwise specified in these documents shall be to match building standards and existing conditions, provided such items are in compliance with all applicable codes. Such codes set the minimum standards to be achieved.
18. All work shall be neat and accurate and done in a manner in accordance with customary trade practices**. The Contractor, at a minimum, shall leave the premises broom clean and orderly after each working day and shall keep the premises free from accumulation of materials and rubbish by disposing of such debris in an onsite disposal container (provided by the contractor) or removed by vehicle in accordance with all applicable state and local regulations.** At the completion of the project the Contractor shall remove all excess materials from the site. Any surplus material agreed to be left for the owner shall be stored neatly by the contractor in a location directed by the owner free from weather, spoilage or pilferage.
19. The Contractor shall coordinate any work which interfaces with other Contractors or with the operations of the Owner. The Contractor shall take all necessary precautions to prevent fire, bodily injury, damage to property and any other calamities that may arise which pose a threat to life, limb property.
20. The Contractor shall not make any changes to the scope of work unless a change order is processed and fully executed by the DOH.
21. The Owner may cancel this contract within three days of signing and not be liable to the Contractor or DOH. Should the Owner opt to cancel they must sign and send a Notice of Cancellation to DOH, otherwise DOH shall issue a Notice to Proceed authorizing the contractor to commence with the proposed improvements.
22. The Contractor shall commence work under this contract within 15 work days of the date of the notice to proceed and complete work within **60** calendar days of the notice to proceed.
23. If the Contractor is delayed at any time in the progress of the work by any act or neglect of the Owner or by any employee of the Owner, or by any separate Contractor employed by the Owner, or by changes ordered in the work or by labor disputes, fire, unusual delay in delivery of materials, transportation, adverse weather conditions not reasonably anticipatable, unavoidable casualties, or any cause beyond the Contractor's control, or by delay authorized by the Owner pending arbitration, or by any other cause which justifies the delay, the contract time may be extended by Change Order for such reasonable time as may be agreed upon by all parties. It shall be the responsibility of the Contractor to request and document in writing such extensions within three (3) work days.
24. In the event that the Contractor does not commence or pursue the work as hereinafter stated, then DOH shall have the right to terminate this agreement and to hire a successor Contractor to perform the work. Any such termination shall be by certified mail to the address noted in this agreement, and shall be effective as of the date of mailing. Payments by the DOH/Owner in the event of termination shall be as follows:
25. The successor Contractor shall first be paid and then the terminated Contractor. Payments to the terminated Contractor shall be limited both as to those funds remaining after payment to the successor Contractor but shall

not exceed the value of the work actually performed by the terminated Contractor. Further, should the total cost for work performed under this contract exceed the amount stated in this agreement due to the Contractor's termination, then the Owner shall have a cause of action against the terminated Contractor for any such additional cost.

26. If, through any cause, the Contractor shall fail to fulfill in a timely and proper manner his obligations under this Contract, or if the Contractor shall violate any of the covenants, agreements, or stipulations of this Contract, DOH shall, thereupon, have the right to terminate this Contract by giving written notice to the Contractor of such termination and specifying the effective date of such termination. In such event, all unfinished work required by the Contractor under this Contract shall, at the option of the DOH, be completed or not.
27. Payments
    1) DOH/Homeowner shall pay the Contractor the price as provided in this contract.
    2) DOH shall make progress payments approximately every 30 days as the work proceeds, on estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Contracting Officer. DOH may, subject to written determination and approval of the Contracting Officer, make more frequent payments to contractors which are qualified small businesses.
    3) Before the first progress payment under this contract, the Contractor shall furnish, in such detail as requested by the Contracting Officer, a breakdown of the total contract price showing the amount included therein for each principal category of the work, which shall substantiate the payment amount requested in order to provide a basis for determining progress payments. The breakdown shall be approved by the Contracting Officer and must be acceptable to DOH. The values and quantities employed in making up this breakdown are for determining the amount of progress payments and shall not be construed as a basis for additions to or deductions from the contract price. The Contractor shall prorate its overhead and profit over the construction period of the contract.
    4) The Contractor shall submit, on AIA forms provided by DOH, periodic estimates showing the value of the work performed during each period based upon the approved breakdown of the contract price. Such estimates shall be submitted not later than 14 days in advance of the date set for payment and are subject to correction and revision as required. The estimates must be approved by the Contracting Officer with the concurrence of the architect prior to payment. If the contract covers more than one project, the Contractor shall furnish a separate progress payment estimate for each.
    5) Along with each request for progress payments and the required estimates, the Contractor shall furnish lien waivers and labor releases as good and sufficient evidence that the premises are free from all liens, damages, and anything chargeable to said contractor.
    6) Except as otherwise provided in State law, DOH shall retain five (5) percent of the amount of progress payments until completion and acceptance of all work under the contract; except, that if upon completion of 50 percent of the work, the Contracting Officer, after consulting with the Architect, determines that the Contractor's performance and progress are satisfactory, DOH may make the remaining payments in full for the work subsequently completed. If the Contracting Officer subsequently determines that the Contractor's performance and progress are unsatisfactory, DOH shall reinstate the five (5) percent retainage until such time as the Contracting Officer determines that performance and progress are satisfactory. Retainage will be released 90 days after project completion.
    7) The Contracting Officer may authorize material delivered on the site and preparatory work done to be taken into consideration when computing progress payments. Material delivered to the Contractor at locations other than the site may also be taken into consideration if the Contractor furnishes satisfactory evidence that (1) it has acquired title to such material; (2) the material is properly stored in a bonded warehouse, storage yard, or similar suitable place as may be approved by the Contracting Officer; (3) the material is insured to cover its full value; and (4) the material will be used to perform this contract. Before any progress payment which includes delivered material is made, the Contractor shall furnish such documentation as the Contracting Officer may require to assure the protection of DOH's/Homeowner's interest in such materials. The Contractor shall remain responsible for such stored material notwithstanding the transfer of title to the Homeowner.

8) All material and work covered by progress payments made shall, at the time of payment become the sole property of the Homeowner, but this shall not be construed as (1) relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work; or, (2) waiving the right of DOH/Homeowner to require the fulfillment of all of the terms of the contract. In the event the work of the Contractor has been damaged by other contractors or persons other than employees of DOH in the course of their employment, the Contractor shall restore such damaged work without cost to DOH/Homeowner and to seek redress for its damage only from those who directly caused it.
9) DOH shall make the final payment due the Contractor under this contract after (1) completion and final acceptance of all work; and (2) presentation of release of all claims against DOH/Homeowner arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has specifically excepted from the operation of the release. Each such exception shall embrace no more than one claim, the basis and scope of which shall be clearly defined. The amounts for such excepted claims shall not be included in the request for final payment. A release may also be required of the assignee if the Contractor's claim to amounts payable under this contract has been assigned.
10) Prior to making any payment, the Contracting Officer may require the Contractor to furnish receipts or other evidence of payment from all persons performing work and supplying material to the Contractor, if the Contracting Officer determines such evidence is necessary to substantiate claimed costs.
11) DOH shall not; (1) determine or adjust any claims for payment or disputes arising there under between the Contractor and its subcontractors or material suppliers; or, (2) withhold any moneys for the protection of the subcontractors or material suppliers. The failure or refusal of DOH to withhold moneys from the Contractor shall in nowise impair the obligations of any surety or sureties under any bonds furnished under this contract.

28. Disputes
    1) "Claim," as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to the contract. A claim arising under the contract, unlike a claim relating to the contract, is a claim that can be resolved under a contract clause that provides for the relief sought by the claimant. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim. The submission may be converted to a claim by complying with the requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.
    2) Except for disputes arising under the clauses entitled Labor Standards - Davis Bacon and Related Acts, herein, all disputes arising under or relating to this contract, including any claims for damages for the alleged breach thereof which are not disposed of by agreement, shall be resolved under this clause.
    3) All claims by the Contractor shall be made in writing and submitted to the Contracting Officer for a written decision.
    4) A claim by the Homeowner against the Contractor shall be subject to a written decision by the Contracting Officer.
    5) The Contracting Officer shall, within calendar 60 (unless otherwise indicated) days after receipt of the request, decide the claim or notify the Contractor of the date by which the decision will be made.
    6) The Contracting Officer's decision shall be final unless the Contractor (1) appeals in writing to a higher level in DOH in accordance with DOH's policy and procedures, (2) refers the appeal to an independent mediator or arbitrator, or (3) files suit in a court of competent jurisdiction. Such appeal must be made within (30 unless otherwise indicated) calendar days after receipt of the Contracting Officer's decision.
    7) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under or relating to the contract, and comply with any decision of the Contracting Officer.
29. The Contractor will not discriminate against any employee or applicant for employment because of race, color, creed, religion, sex, sexual preference, national origin, or mental or physical disability during the performance of this agreement. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, in all employment practices such as the following: employment

upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation and selection for training, including apprenticeship, without regard to their race, color, creed, religion, sex, sexual preference, national origin or mental or physical disability. This provision will be inserted in all subcontracts, if any, for work covered by this agreement.

30. Equal Employment Opportunity (EEO) Clause

    During the performance of this contract, the Contractor agrees as follows:

    1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and the employees are treated during employment without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
    2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.
    3) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
    4) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations and relevant orders of the Secretary of Labor.
    5) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.
    6) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by the rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
    7) The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance. Provided, however, that in the event a Contractor becomes involved in, or is threatened with litigation with a subcontractor or vendor as a result of such direction by the administering agency the contractor may request the United States to enter into such litigation to protect the interests of the United States.

31. In the event of the Contractor's noncompliance with this equal opportunity clause or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further contracts in accordance with procedures authorized in Presidential Executive Order 11246, or by rule, regulations, or order of the Secretary of Labor or as provided by law.

32. The following applies to all contracts of $10,000,000.00 or more: SECTION 402 VETERANS OF THE VIETNAM ERA. AFFIRMATIVE ACTION FOR DISABLED VETERANS AND VETERANS OF THE VEITNAM ERA. The Contractor will not discriminate against any employee or applicant for employment

because he or she is a disabled veteran of the Vietnam era in regard to any position for which the employee or applicant for employment is qualified. The Contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified disabled veterans and veterans of the Vietnam era without discrimination based upon their disability or veteran status in all employment practices such as the following: employment upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation and selection for training, including apprenticeship.

33. No officer, employee or member of the Governing Body of the Municipality shall have any financial interest, direct or indirect, in this contract or the proceeds of this loan.
34. DOH retains the right to reject any or all bids or any part of any bid in part or in whole if deemed to be in the best interest of the project.
35. Substitutions of materials from that specified are only allowed on an approved/equal basis. The Contractor must submit written documentation of the substitute item or material for approval by the Owner and Program prior to making such substitution. Any items or material substituted by the Contractor without prior written approval of the Owner and Program will at the Contractor's expense be replaced if it is determined not to be equal to the item or material specified. Any surrounding, adjoining, or dependent items affected by replacement of the unequal substituted material shall also be replaced, reworked, and reinstalled at no cost to the Owner.
36. Bids shall contain prices for general categories of work and/or items as specified on the provided bid sheets. In the case of a mathematical error by the Contractor, the correct sum of the individual line items in the cost summary shall be the Contractor's bid.
37. All bids shall remain in effect for thirty (30) calendar days.
38. The Owner will supply all necessary power required by the Contractor at no additional cost to complete his work. Power shall be limited to the use of existing outlets and shall not exceed the existing capacity of the system. Power required over the capacity of the existing electrical system shall be the responsibility of the Contractor. Heating during construction shall be supplied by the Owner.
39. If any unseen or unknown asbestos related conditions arise during the work the Contractor shall stop all work immediately and notify the DOH of such.
40. OTHER PROVISIONS – LEAD BASED PAINT

    For properties built before 1978, if the project will involve disturbing painted surfaces or cleaning up lead contaminated dust or soil, use certified renovation or lead abatement contractors and workers using lead-safe work practices and clearance examinations consistent with the more stringent of EPA's Renovation, Repair, and Painting Rule and HUD's Lead Safe Housing Rule. The Contractor shall comply with the requirements concerning lead-based paint contained in the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. 4821-4846) as implemented by 24 CFR Part 35 and EPA's Repair Renovation, and Painting Rule at 40 CFR.80 Subpart E.

    Any and all rehabilitation work under this Agreement will comply with the requirements of the Federal Lead-Based Paint Poisoning Prevention Act (42 U.S.C. 4831) which prohibits the use of lead-based paint in residential structures constructed or rehabilitated with Federal Assistance in any form.

    The construction or rehabilitation of residential structures with assistance provided under this contract is subject to the final regulations "Requirements for Notification, Evaluation and Reduction of Lead-Based Paint Hazards in Federally owned Residential Property and Housing Receiving Federal Assistance." The regulation is at 24 CFR part 35. It implements sections 1012 and 1013 of the Residential Lead-Based Paint Hazard Reduction Act

of 1992, Title X, of the Housing and Community Development Act of 1992. Sections 1012 and 1013 amend the Lead-Based Paint Poisoning Prevention Act of 1971.

Beginning April 22, 2010, the Contractor is required to have a certificate from a 6 hour EPA/HUD RRP lead remediation course.

41. The Contractor shall comply with the provisions of the immigration Reform and Control Act of 1986 effective and enforceable as of June 6, 1987 which Act makes unlawful the hiring for employment or subcontracting individuals failing to provide documentation of legal eligibility to work in the United States. The Contractor shall hold DOH, its agents and the Homeowner harmless for the failure to comply with the provisions of said Act.

SECTION 000115

LIST OF DRAWING SHEETS

1.LIST OF DRAWINGS

A. Drawings: Drawings consist of the Contract Drawings and other drawings listed on the Table of Contents page of the separately bound drawing set titled 'Connecticut Department of Housing, Community Development Block Grant, Disaster Recovery Program, Project 2240 – 54 Rainbow Road, Bridgeport, CT, Owner Occupied Rehabilitation and Rebuilding Program, dated 6/27/2014, as modified by subsequent Addenda and Contract modifications.

B. List of Drawings: Drawings consist of the following Contract Drawings and other drawings of type indicated:
   1. Title Sheet – Sheet T-0.0
   2. Schematic – Basement and First Floor Layout, Sheet A-1.0
   3. Schematic – Roof Layout, Sheet A-2.0

END OF DOCUMENT

SECTION 00 31 26

EXISTING HAZARDOUS MATERIAL INFORMATION

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. "Hazardous Material Inspection Report, 54 Rainbow Road, Bridgeport, CT" June 13, 2014

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

Facility Support Services, LLC

Environmental & Safety Consulting Engineers

Connecticut Department of Housing
Community Development Block Grant – Disaster Recovery
Owner Occupied Recovery and Rehabilitation Program

Hazardous Materials
Inspection Report

54 Rainbow Road
Bridgeport, Connecticut

PREPARED FOR:

Martinez Couch & Associates, LLC
1084 Cromwell Ave. Suite A-2
Rocky Hill, CT 06067

PREPARED BY:

Facility Support Services, LLC
2685 State Street
Hamden, CT 06517
Phone (203) 288-1281

June 13, 2014

FSS #22214-1811

SIGNATURES OF REPORT AUTHORS

The employees of Facility Support Services, LLC whose names appear below prepared this report. Requests for information on the content of this document should be directed to these individuals.

Kevin Bogue

Kevin S. Bogue, LEP, CHMM
Project Manager
CTDPH Asbestos Inspector #000157

TABLE OF CONTENTS

Section		Page
I.	Introduction	1
II.	Mold	1
III.	Radon	3
IV.	Asbestos	4
V.	PCBs	5
VI.	Lead	6
VII.	Conclusions & Recommendations	6

TABLES

Table 1	Summary of Laboratory Analysis of Spore Types
Table 2	Summary of Laboratory Analysis of Radon
Table 3	Positive Asbestos Bulk Sampling Results Table
Table 4	Summary of Laboratory Analysis of PCB's

ATTACHMENTS

Attachment A	Mold Analytical Data
Attachment B	Radon Analytical Data
Attachment C	FSS Licensure
Attachment D	Asbestos Laboratory Analytical Data
Attachment E	Lead Analytical Data
Attachment F	PCB Analytical Data

I. Introduction

Facility Support Services, LLC (FSS) was contracted by Martinez, Couch & Associates, LLC (MCA) to perform a limited scope hazardous materials survey of 54 Rainbow Road in Bridgeport, Connecticut. The purpose of this inspection was to identify the presence of asbestos, PCBs, lead paint and mold in certain building materials proposed for removal/demolition that qualify for the repair/replacement of items damaged by the October 2012 Tropical Storm Sandy under the Connecticut Department of Housing (DOH), Community Development Block Grant – Disaster Recovery Owner Occupied Recovery and Rehabilitation Program. In addition, FSS performed radon testing as required for DOH funded projects. FSS utilized best industry practices to identify all suspect materials associated with the structures. Any material that has not been identified during this inspection or discovered during renovation/demolition activities must be presumed to be hazardous until such time that samples of the material can be collected and analyzed.

II. Mold

FSS conducted sampling for mold on May 21, 2014. Testing for total spores in air was conducted for the following areas of 54 Rainbow Road in Bridgeport, Connecticut to identify concerns with indoor air quality related to mold and fungi:

- 2nd Floor Bedroom
- Basement
- Outside of House

The outside ambient air sample provided a background reference sample (collected from a location in the front yard). Mr. Chris Hudacek of FSS conducted the spore sampling utilizing an air sampling pump and sample media. Air was collected at a rate of 15.0 liters of air per minute. The samples were collected on Air-O-Cell type sampling cartridges located in line with the sampling pump, which ran for 10 minutes at each sampling location.

The spore samples were analyzed by EMSL Analytical of Wallingford, Connecticut for the identification and enumeration of spores (EMSL Method M001). EMSL is a State of Connecticut, Department of Public Health certified laboratory (Accreditation Number 165118). Analytical reports for mold are included in Appendix A.

The analysis for total spore counts is a direct microscopic examination and does not include culturing or growing fungi. Therefore, the results include both viable and non-viable spores. Spore trap results are reported in spores per cubic meter of air.

Table 1
Summary of Laboratory Analysis of Spore Types
54 Rainbow Road, Bridgeport, Connecticut

Sample Number & Location	Raw Count	Total Fungi (Count/m^3)	Spore Types Present
222140521 01M Basement	221	4,690	Alternaria, Ascospores, Aspergillus/Penicillium, Basidiospores, Chaetomium, Cladosporium, Curvularia, Epicoccum, Ganoderma, Myxomycetes, rust, torula
222140521 02M 2nd Floor Main Bedroom	38	800	Ascospores, Aspergillus/Penicillium, Basidiospores, Cladosporium, Ganoderma, myzomycetes
222140521 03M Outside	201	4,180	Ascospores, Aspergillus/Penicillium, Basidiospores, Cladosporium, Curvularia, Ganoderma, Myzomycetes, Pithomyces, rust, Torula, Cercospora, Oidium

The primary mold species in the Outside sample was Ascospores; for interior samples the primary species was Aspergillus/Penicillium.

Ascospores – Encompasses a wide range of genera worldwide and associated with member of the Phylum Ascomycota. This spore type is found everywhere in nature.

Aspergillus/Penicillium - Can be associated with hay fever and asthma, and can grow on a wide range of substrates indoors, and are prevalent in water-damaged buildings and where foods are stored.

In Connecticut, there are currently no regulatory standards directly governing mold/fungal spore concentrations. Although no standards for mold exist, some information regarding levels have been published, including the following:

Baxter, et al considers mold contamination present in a building when the total mold spore concentration per cubic meter is above 10,000. However in special cases, even low quantitative levels of certain particles or particle types (such as *Penicillium/Aspergillus* spore chains in an un-treated building) may be diagnostic and may indicate a hidden mold reservoir that merits further investigation.

FSS's investigation found total spore concentrations inside the 54 Rainbow Road residence of up to 4,690/m^3, which is below the 10,000/m^3 level noted above.

The American Conference of Government Industrial Hygienists (ACGIH) stated that indoor mold levels are generally less than 1/3 the outdoor level and that when indoor mold is at more than this level remedial action should be taken to find the source of the elevated counts and to clean it up. However, this is a general rule and may be inaccurate and unreliable method for screening buildings for mold.

FSS's investigation found a total spore concentration in the basement interior sample at a level above the outside sample, well above the 1/3 level noted in the previous paragraph. The other interior sample collected from the 2nd floor bedroom was approximately 1/5th of the outdoor sample, below the 1/3 level noted above.

III. Radon

Initial radon testing was conducted by Mr. Chris Hudacek. Test results were obtained by using a passive activated charcoal device manufactured and analyzed by Radon Testing Corporation of America of Elmsford, New York. The test devices are individually numbered and marked with a bar code for identification (RTCA 4 Pass Charcoal Canister, NRSB Device Code 10331).

Devices were placed in the basement level of the residence on May 21, 2014. The sampling devices were placed on table with a yellow "Do Not Disturb Test in Progress" warning sign placed beneath the test device. The homeowner was reminded to not open

windows or to allow anyone to tamper with the test device. Testing time was approximately 59.5 hours. QA/QC consisted of the collection of a duplicate sample.

The Radon canisters were submitted to Radon Testing Corporation of America for analysis. The analytical results for initial sample and duplicate were reported to be 23.9 pCi/L (sample# 2313476), and 27.9 pCi/L (sample #2313533), respectively, as shown on Table 2 below. The EPA action level established for Radon is 4.0 pCi/L. Analytical result reports are included in Appendix B.

Table 2
Summary of Laboratory Analysis of Radon
54 Rainbow Road, Bridgeport, Connecticut

Canister ID#	Location	Radon Concentration (pCi/L)
May 21-24, 2014		
2313476	Basement	23.9
2313533	Basement (Duplicate)	27.9

IV. Asbestos

FSS conducted a limited scope asbestos inspection and bulk sampling on May 13, 2014 of suspect building materials that are proposed for renovations. The inspection was conducted by Chris Hudacek, a State of Connecticut licensed Asbestos Inspector. Mr. Hudacek's Connecticut Asbestos Inspectors/Management Planner license is provided in Appendix C.

The following suspect materials were indentified during the inspection:

- Roof Shingle (top layer)
- Roof Shingle (2nd layer)
- Roof Shingle (3rd layer)
- Roof Shingle (bottom layer)
- Floor Tile (basement, wood pattern)
- Floor Tile (basement, green)
- Floor Tile (basement, red)

- Floor Tile Mastic (associated with red floor tile)
- Sheetrock (basement, near exit)
- Joint Compound (basement, near exit)
- Insulation Paper Adhesive (2nd floor)
- Sheetrock (2nd floor)
- Joint compound (2nd floor)

This asbestos inspection was performed in accordance with the EPA, NESHAP regulations for building renovations and demolition, 40 CFR Part 61, Amended 11/20/1990. The bulk asbestos samples collected during this inspection were delivered under full chain of custody and analyzed by EMSL Analytical, Inc., via EPA/600/R-93/116. This is currently the approved EPA test method, which uses Polarized Light Microscopy (PLM). EMSL Analytical, Inc. is an accredited asbestos laboratory (NVLAP # 200700-0) and is a State of Connecticut approved public health laboratory for asbestos analysis. Copies of the laboratory analytical results can be found in Attachment D of this report.

Laboratory results have revealed that the asbestos content of the following tested materials are greater than the 1% required to confirm a material as asbestos containing.

- Basement Red Floor Tile and associated mastic
- 2nd Floor Joint compound

V. PCBs

Following an inspection of building materials proposed for renovations, one suspected PCB-containing materials were identified:

- Mastic associated with red floor tile (basement)

FSS collected a sample of these materials for laboratory analysis for PCBs by EPA Method 8082A with Soxhlet Extraction. Laboratory data indicates that the PCB content of the interior window glazing was not detected (<0.80 ppm), below the 1 ppm action level for PCBs. No further investigations, or special disposal requirements (for PCBs) are required for these materials.

VI. Lead

The subject residential structure was built prior to 1978 (1964) and therefore the likelihood that lead painted surfaces are present is increased. As a residential structure built prior to 1978 the removal of lead painted materials where a child under 6 is housed, or may visit, would trigger the EPA Renovation, Repair and Painting (RRP) rule. Furthermore, adherence to the requirements of The Lead-Safe Housing Rule (US Department of Housing and Urban development, HUD) are stipulated by the Connecticut Department of Housing (DOH) as part of the Community Development Block Grant – Disaster Recovery Owner Occupied Recovery and Rehabilitation Program.

A building wide XRF inspection was conducted by Maureen Monaco of Gilberto Lead Inspections, LLC (Gilbertco) utilizing a Scitec Map4 Portable X-Ray Fluoroscope Spectrum Analyzer with a Cobalt 57 source. The findings of the investigation determined one area tested positive for lead based paint (>1.0 mg/cm^2):

- 2nd Floor Left Bedroom (Window well and exterior sash)

A copy of the Gilbertco Lead Inspection Report is provided in Appendix E. Following the HUD Lead-Safe Housing Guidelines, on-intact materials should undergo interim measures to abatement the hazard. Non-intact lead containing materials have been identified as the following:

- 2nd Floor Left Bedroom (Window well and exterior sash)

FSS has evaluated proposed demolition materials against the XRF lead evaluation of painted surfaces. Based on this evaluation, the materials proposed for demolition will not contain levels of leachable lead above the hazardous waste determination level.

VII. Conclusions & Recommendations

When the structure is renovated, all removed debris should be sent to an appropriate landfill for final disposal following all appropriate regulations. Any work involving lead-containing paints should be conducted under the EPA's RRP Renovation, Repair and Painting Rule. Any material discovered during renovation activities which

have not been included in this survey must be presumed to contain asbestos, lead and PCBs until such time that the material can be evaluated and sampled.

Asbestos – Asbestos containing materials (>1% asbestos) were identified in one material proposed for renovation or demolition:

- Red Floor tile and associated mastic (basement)

An asbestos workplan will be required for removal and proper disposal of this material.

PCBs - One suspected PCB-containing materials was identified in proposed renovation materials and sampled. Results indicates that the mastic associated with the red floor tile located in the basement did not contained detectable levels of PCBs (< 0.80 ppm), below the 1 ppm action level for PCBs, and therefore this materials is unregulated for handling and disposal.

Mold – Mold spore count analysis indicates accelerated mold growth in the basement of the residence (when comparing indoor mold spore count numbers to exterior spore count numbers).

Radon – Levels of radon were identified in the basement of the residence at a level of 23.9 and 27.9 pCi/L, above the EPA action level of 4.0 pCi/L. Further work related to reducing radon exposure at this residence will be required.

Lead - Following the HUD Lead-Safe Housing Guidelines, the non-intact areas should undergo interim measures to abatement the hazard.

- 2nd Floor Left Bedroom (Window well and exterior sash)

FSS has evaluated proposed demolition materials against the XRF lead evaluation of painted surfaces. Based on this evaluation, the materials proposed for demolition will not contain levels of leachable lead above the hazardous waste determination level.

ATTACHMENTS

ATTACHMENT A

MOLD ANALYTICAL DATA

ATTACHMENT B

RADON ANALYTICAL DATA

ATTACHMENT C

FSS LICENSURE

ATTACHMENT D

ASBESTOS LABORATORY ANALYTICAL DATA

ATTACHMENT E

LEAD ANALYTICAL DATA

ATTACHMENT F

PCB ANALYTICAL DATA

EMSL Analytical, Inc.

29 North Plains Highway, Unit # 4 Wallingford, CT 06492
Phone/Fax: 203-284-5948 / (203) 284-5978
http://www.EMSL.com / wallingfordlab@emsl.com

Order ID: 241401921
Customer ID: FSS93
Customer PO:
Project ID:

Attn: Kevin Bogue
Facility Support Services, LLC
2685 State Street
Hamden, CT 06517

Phone: (203) 288-1281
Fax: (203) 248-4409
Collected: 05/21/2014
Received: 05/22/2014
Analyzed: 05/30/2014

Proj: 54 RAINBOW RD/22214-2240

Test Report: Air-O-Cell(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods EMSL 05-TP-003, ASTM D7391)

Lab Sample Number:	241401921-0001			241401921-0002			241401921-0003		
Client Sample ID:	22214052101M			22214052102M			22214052103M		
Volume (L):	150			150			150		
Sample Location:	Basement			2nd floor main bed			Outside		
Spore Types	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**
Alternaria	1	20	0.4	-	-	-	-	-	-
Ascospores	52	1100	23.5	9	200	25	92	1900	45.5
Aspergillus/Penicillium	74	1600	34.1	18	380	47.5	1	20	0.5
Basidiospores	37	780	16.6	4	80	10	62	1300	31.1
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	1	20	0.4	-	-	-	-	-	-
Cladosporium	24	510	10.9	4	80	10	19	400	9.6
Curvularia	4	80	1.7	-	-	-	1	20	0.5
Epicoccum	4	80	1.7	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	11	230	4.9	1	20	2.5	6	100	2.4
Myxomycetes++	11	230	4.9	2	40	5	5	100	2.4
Pithomyces	-	-	-	-	-	-	2	40	1
Rust	1	20	0.4	-	-	-	2	40	1
Scopulariopsis	-	-	-	-	-	-	-	-	-
Stachybotrys	-	-	-	-	-	-	-	-	-
Torula	1	20	0.4	-	-	-	1	20	0.5
Ulocladium	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora	-	-	-	-	-	-	8	200	4.8
Oidium	-	-	-	-	-	-	2	40	1
Total Fungi	**221**	**4690**	**100**	**38**	**800**	**100**	**201**	**4180**	**100**
Hyphal Fragment	13	270	5.8	3	60	7.5	4	80	1.9
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	6	100	2.1	3	60	7.5	26	550	13.2
Analyt. Sensitivity 600x	-	21	-	-	21	-	-	21	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	3	-	-	1	-	-	-	-
Fibrous Particulate (1-4)	-	3	-	-	1	-	-	-	-
Background (1-5)	-	4	-	-	1	-	-	3	-

Bipolaris++ = Bipolaris/Drechslera/Exserohilum
Myxomycetes++ = Myxomycetes/Periconia/Smut

No discernable field blank was submitted with this group of samples.

Gloria V. Oriol, Laboratory Manager
or Other Approved Signatory

High levels of background particulate can obscure spores and other particulates leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Wallingford, CT AIHA-LAP, LLC--EMLAP Lab 165118

Initial report from: 05/30/2014 11:56:47

For Information on the fungi listed in this report please visit the Resources section at www.emsl.com

OrderID: 241401921

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Microbiology Chain of Custody

EMSL Order Number (*Lab Use Only*): 24140192

EMSL Analytical, Inc.
4 Fairfield Blvd

Wallingford, CT 06492
PHONE: (203) 284-5948
FAX: (203) 284-5978

Company: Facility Support Services, LLC	**EMSL-Bill to:** ☐ Different ☑ Same If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 2685 State Street	
City: Hamden **State/Province:** CT	**Zip/Postal Code:** 06517 **Country:** United States
Report To (Name): Kevin Bogue	**Telephone #:** 203-288-1281
Email Address: kbogue.fss@snet.net	**Fax #:** 203-248-4409 **Purchase Order:**
Project Name/Number: 54 Rainbow Rd/22214-2240	**Please Provide Results:** ☐ FAX ☑ E-mail ☐ Mail
U.S. State Samples Taken: CT	**Connecticut Samples:** ☐ Commercial ■ Residential

Turnaround Time (TAT) Options* - Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ■ 1 Week ☐ 2 Week

**Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide. TATs are subject to methodology requirements*

Non Culturable Air Samples (Spore Traps) – Test Codes

- **M001** Air-O-Cell
- **M049** BioSIS
- **M030** Micro 5
- **M173** Allegro M2
- **M003** Burkard
- **M174** MoldSnap
- **M004** Allergenco
- **M043** Cyclex
- **M176** Relle Smart
- **M032** Allergenco-D
- **M002** Cyclex-d
- **M130** Via-Cell
- **M172** Versa Trap

Other Microbiology Test Codes

- **M041** Fungal Direct Examination
- **M005** Viable Fungi ID and Count
- **M006** Viable Fungi ID and Count (Speciation)
- **M007** Culturable Fungi
- **M008** Culturable Fungi (Speciation)
- **M009** Gram Stain Culturable Bacteria
- **M010** Bacterial Count and ID – 3 Most Prominent
- **M011** Bacterial Count and ID – 5 Most Prominent
- **M013** Sewage Contamination in Buildings
- **M014** Endotoxin Analysis
- **M015** Heterotrophic Plate Count
- **M180** Real Time Q-PCR-ERMI 36 Panel
- **M018** Total Coliform (Membrane Filtration)
- **M020** Fecal *Streptococcus* (Membrane Filtration)
- **M210-215** *Legionella* Detection
- **M026** Recreational Water Screen
- **M027** Mycotoxin Analysis
- **M029** *Enterococci*
- **M019** Fecal Coliform
- **M133** MRSA Analysis
- **M028** *Cryptococcus neoformans* Detection
- **M120** *Histoplasma capsulatum* Detection
- **M033-39** Allergen Testing
- **M044** Group Allergen (Cat, Dog, Cockroach, Dustmites)
- **Other** See Analytical Price Guide

Preservation Method (Water):

Name of Sampler: Chris Hydacek **Signature of Sampler:** [signature]

Sample #	Sample Location	Sample Type	Test Code	Volume/Area	Date/Time Collected
Example: A1	Kitchen	Air	M001	75L	1/1/12 4:00 PM
222140521 01M	Basement	Air	M001	150 L	5/21/14 @ 5:05
02M	2nd floor Main Bed	↓	↓	↓	5/21/14 @ 5:12
03M	Outside	↓	↓	↓	5/21/14 @ 5:28

Client Sample # (s): 01 - 03 **Total # of Samples:** 3

Relinquished (Client): [signature] **Date:** 5/22/14 **Time:**

Received (Client): **Date:** **Time:**

Comments:

RECEIVED
MAY 22 2014
By [signature] 16:00

Page 1 of 1 pages

PC1405300018

RTCA RADON TESTING CORPORATION OF AMERICA

Site Radon Inspection Report

Date : 05/30/2014

Mr. Kevin Bogue
FACILITY SUPPORT SVCS., LLC
2685 State Street
Hamden, CT 06517-

Client: Lorna Hewitt
Test Location: 54 Rainbow Road
Bridgeport, CT 06606-

Individual Canister Results

Canister ID# :	2313476	Test Start :	05/21/2014 @ 17:04
Canister Type :	Charcoal Canister 3 inch	Test Stop :	05/24/2014 @ 09:40
Location :	Basement B-2	Received:	05/30/2014 @ 10:02
Radon Level :	23.9 pCi/L	Analyzed:	05/30/2014 @ 14:28

Error for Measurement is: ± 1.0 pCi/L

Canister ID# :	2313533	Test Start :	05/21/2014 @ 17:04
Canister Type :	Charcoal Canister 3 inch	Test Stop :	05/24/2014 @ 09:40
Location :	Basement Family Rm	Received:	05/30/2014 @ 10:02
Radon Level :	27.9 pCi/L	Analyzed:	05/30/2014 @ 15:06

Error for Measurement is: ± 1.0 pCi/L

The results indicate that at least one testing device registered at or above the United States Environmental Protection Agency (EPA) action level of 4.0 picoCuries per liter of air (pCi/L). The EPA recommends mitigation if the average of two short-term tests taken in the lowest level of the building suitable for occupancy show radon levels that are equal to or greater than 4.0 pCi/L.

For information on how to reduce radon levels in your home, please review the EPA booklet: Consumer's Guide to Radon Reduction (www.epa.gov/radon/pdfs/consguid.pdf) and contact your state health department. The EPA maintains a radon information website, including copies of its publications, at www.epa.gov/iaq/radon.

For New Jersey clients: Please see the attached guidance document entitled Radon Testing and Mitigation: The Basics for further information.

For New York clients: If the radon level of one or more testing devices is equal to or exceeds 20 pCi/L please contact the New York State Department of Health, Bureau of Environmental Radiation Protection, for technical advice and assistance at 518-402-7556 or toll free1-800-458-1158.

PLEDGE OF ASSURED QUALITY

All procedures used for generating this report are in complete accordance with the current EPA protocols for the analysis of radon in air (EPA 402-R-92-004). The analytical results relate only to the samples tested, in the condition received by the lab, and that calculations were based upon the information supplied by client. RTCA and its personnel do not assume responsibility or liability , collectively and individually, for analysis results when detectors have been improperly handled or placed by the consumer, nor does RTCA and its personnel accept responsibility for any financial or health consequences of subsequent action or lack of action, taken by the customer or it's consultants based on RTCA-provided results.

National Radon Safety Board NRSB Certified Radon Professionals

Andreas C. George
Radon Measurement Specialist
NJ MES 11089

Dante Galan
Laboratory Director

NRSB ARL0001
NYS ELAP ID: 10806
PADEP ID: 0346
NJDEP ID: NY933
NJ MEB 90036
FL DOH RB1609

(914)345-3380
FAX (914)345-8546

2 Hayes Street, Elmsford, NY 10523
www.rtca.com

0004366 FP **PRSRT T4 0 0764 06359
CHRISTOPHER M. HUDACEK
28 ANNA FARM RD W
NORTH STONINGTON CT 06359-1034

Dear Licensed/Certified Professional,

Attached you will find your validated license/certification for the coming year. Should you have any questions about your license/certificate renewal, please do not hesitate to write or call:

Department of Public Health **(860) 509-7603**
P.O. Box 340308
M.S.#12MQA **http://www.dph.state.ct.us**
Hartford, CT 06134-0308

Sincerely,

JEWEL MULLEN, MD, MPH, MPA, COMMISSIONER
DEPARTMENT OF PUBLIC HEALTH

INSTRUCTIONS:

1. Detach and sign each of the cards on this form.
2. Display the large card in a prominent place in your office or place of business.
3. The wallet card is for you to carry on your person. If you do not wish to carry the wallet card, place it in a secure place.
4. The employer's copy is for persons who must demonstrate current licensure/certification in order to retain employment or privileges. The employer's card is to be presented to the employer and kept by them as a part of your personnel file. Only one copy of this card can be supplied to you.

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH
PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTICUT
THE INDIVIDUAL NAMED BELOW IS CERTIFIED BY THIS DEPARTMENT AS A

ASBESTOS CONSULTANT-INSP/MGMT PLANNER

CHRISTOPHER M. HUDACEK

CERTIFICATION NO. 000259
CURRENT THROUGH 02/28/15
VALIDATION NO. 03-756444

SIGNATURE COMMISSIONER

EMPLOYER'S COPY

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

NAME
CHRISTOPHER M. HUDACEK

VALIDATION NO.	CERTIFICATION NO.	CURRENT THROUGH
03-756444	000259	02/28/15

PROFESSION
ASBESTOS CONSULTANT-INSP/MGMT PLANNER

SIGNATURE COMMISSIONER

WALLET CARD

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

NAME
CHRISTOPHER M. HUDACEK

VALIDATION NO	CERTIFICATION NO.	CURRENT THROUGH
03-756444	000259	02/28/15

PROFESSION
ASBESTOS CONSULTANT-INSP/MGMT PLANNER

SIGNATURE COMMISSIONER

EMSL Analytical, Inc.
29 North Plains Highway, Unit # 4, Wallingford, CT 06492
Phone/Fax: 203-284-5948 / (203) 284-5978
http://www.EMSL.com wallingfordlab@emsl.com

EMSL Order:	241401923
CustomerID:	FSS93
CustomerPO:	
ProjectID:	

Attn: **Kevin Bogue**
Facility Support Services, LLC
2685 State Street

Hamden, CT 06517

Phone:	(203) 288-1281
Fax:	(203) 248-4409
Received:	05/22/14 4:00 PM
Analysis Date:	5/29/2014
Collected:	5/21/2014

Project: **54 RAINBOW RD/22214-2240**

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

			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**% Type**
22214052101A *241401923-0001*	Roof - shingle (top layer)	Gray/Black Fibrous Homogeneous	7% <1%	Glass Cellulose	93%	Non-fibrous (other)	**None Detected**
22214052101B *241401923-0002*	Roof - shingle (top layer)	White/Black Fibrous Homogeneous	10%	Glass	20% 70%	Ca Carbonate Non-fibrous (other)	**None Detected**
22214052102A *241401923-0003*	Roof - shingle (2nd layer)	Black Fibrous Homogeneous	3% <1%	Glass Cellulose	97%	Non-fibrous (other)	**None Detected**
22214052102B *241401923-0004*	Roof - shingle (2nd layer)	Gray/Black Fibrous Homogeneous	15%	Glass	20% 65%	Ca Carbonate Non-fibrous (other)	**None Detected**
22214052103A *241401923-0005*	Roof - shingle (3rd layer from top)	Gray/Black Fibrous Homogeneous	4% <1%	Cellulose Glass	96%	Non-fibrous (other)	**None Detected**
22214052103B *241401923-0006*	Roof - shingle (3rd layer from top)	Black Fibrous Homogeneous	25%	Cellulose	75%	Non-fibrous (other)	**None Detected**
22214052104A *241401923-0007*	Roof - shingle (bottom layer)	Gray/Black Fibrous Homogeneous	6%	Cellulose	94%	Non-fibrous (other)	**None Detected**
22214052104B *241401923-0008*	Roof - shingle (bottom layer)	White/Black Fibrous Homogeneous	25%	Cellulose	10% 65%	Quartz Non-fibrous (other)	**None Detected**

Analyst(s)

Kristin Lopez (13)
Santino Ferraro (13)

Gloria V. Oriol, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Wallingford, CT NVLAP Lab Code 200700-0,

Initial report from 05/30/2014 09:24:12

EMSL Analytical, Inc.
29 North Plains Highway, Unit # 4, Wallingford, CT 06492
Phone/Fax: 203-284-5948 / (203) 284-5978
http://www.EMSL.com wallingfordlab@emsl.com

EMSL Order:	241401923
CustomerID:	FSS93
CustomerPO:	
ProjectID:	

Attn: **Kevin Bogue**
Facility Support Services, LLC
2685 State Street

Hamden, CT 06517

Phone:	(203) 288-1281
Fax:	(203) 248-4409
Received:	05/22/14 4:00 PM
Analysis Date:	5/29/2014
Collected:	5/21/2014

Project: **54 RAINBOW RD/22214-2240**

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

			Non-Asbestos				Asbestos	
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**%**	**Type**
22214052105A *241401923-0009*	Basement- floor - wood pattern self adhesive floor tile	Brown Non-Fibrous Homogeneous	<1%	Cellulose	100%	Non-fibrous (other)		**None Detected**
22214052105B *241401923-0010*	Basement- floor - wood pattern self adhesive floor tile	Brown/Gray Non-Fibrous Homogeneous	<1%	Synthetic	35% 65%	Ca Carbonate Non-fibrous (other)		**None Detected**
22214052106A *241401923-0011*	Basement- floor - green self-adhesive tiles	Green Non-Fibrous Homogeneous	<1%	Cellulose	100%	Non-fibrous (other)		**None Detected**
22214052106B *241401923-0012*	Basement- floor - green self-adhesive tiles	Green Non-Fibrous Homogeneous	<1%	Cellulose	35% 65%	Ca Carbonate Non-fibrous (other)		**None Detected**
22214052107A *241401923-0013*	Basement- floor - red floor tile	Red Non-Fibrous Homogeneous	<1% <1%	Cellulose Synthetic	98%	Non-fibrous (other)	**2%**	**Chrysotile**
22214052107B *241401923-0014*	Basement- floor - red floor tile	Tan/Red Non-Fibrous Homogeneous			20% 78%	Ca Carbonate Non-fibrous (other)	**2%**	**Chrysotile**
22214052108A *241401923-0015*	Basement- floor - mastic assoc. w/07	Black Non-Fibrous Homogeneous	2%	Cellulose	95%	Non-fibrous (other)	**3%**	**Chrysotile**
22214052108B *241401923-0016*	Basement- floor - mastic assoc. w/07	Black Non-Fibrous Homogeneous	<1%	Cellulose	95%	Non-fibrous (other)	**5%**	**Chrysotile**

Analyst(s)

Kristin Lopez (13)
Santino Ferraro (13)

Gloria V. Oriol, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Wallingford, CT NVLAP Lab Code 200700-0,

Initial report from 05/30/2014 09:24:12

EMSL Analytical, Inc.
29 North Plains Highway, Unit # 4, Wallingford, CT 06492
Phone/Fax: 203-284-5948 / (203) 284-5978
http://www.EMSL.com wallingfordlab@emsl.com

EMSL Order:	241401923
CustomerID:	FSS93
CustomerPO:	
ProjectID:	

Attn: **Kevin Bogue**
Facility Support Services, LLC
2685 State Street

Hamden, CT 06517

Phone:	(203) 288-1281
Fax:	(203) 248-4409
Received:	05/22/14 4:00 PM
Analysis Date:	5/29/2014
Collected:	5/21/2014

Project: **54 RAINBOW RD/22214-2240**

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

			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**% Type**
22214052109A *241401923-0017*	Basement- at exit - sheetrock	Gray/Tan Non-Fibrous Homogeneous	<1% <1%	Cellulose Hair	100%	Non-fibrous (other)	**None Detected**
22214052109B *241401923-0018*	Basement- at exit - sheetrock	White Non-Fibrous Homogeneous	4%	Cellulose	30% 3% 63%	Gypsum Ca Carbonate Non-fibrous (other)	**None Detected**
22214052110A *241401923-0019*	Basement- at exit - joint compound	White Non-Fibrous Homogeneous	<1%	Cellulose	100%	Non-fibrous (other)	**None Detected**
22214052110B *241401923-0020*	Basement- at exit - joint compound	White Non-Fibrous Homogeneous			45% 55%	Ca Carbonate Non-fibrous (other)	**None Detected**
22214052111A *241401923-0021*	2nd floor - insulation paper adhesive	Black Fibrous Homogeneous	3% <1%	Min. Wool Cellulose	97%	Non-fibrous (other)	**None Detected**
22214052111B *241401923-0022*	2nd floor - insulation paper adhesive	Black Non-Fibrous Homogeneous	3% <1% <1%	Glass Synthetic Cellulose	97%	Non-fibrous (other)	**None Detected**
22214052112A *241401923-0023*	2nd floor - sheetrock #2	Gray Non-Fibrous Homogeneous	2%	Cellulose	98%	Non-fibrous (other)	**None Detected**
22214052112B *241401923-0024*	2nd floor - sheetrock #2	White Non-Fibrous Homogeneous	4%	Cellulose	35% 61%	Gypsum Non-fibrous (other)	**None Detected**

Analyst(s)

Kristin Lopez (13)
Santino Ferraro (13)

Gloria V. Oriol, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Wallingford, CT NVLAP Lab Code 200700-0,

Initial report from 05/30/2014 09:24:12

EMSL Analytical, Inc.
29 North Plains Highway, Unit # 4, Wallingford, CT 06492
Phone/Fax: 203-284-5948 / (203) 284-5978
http://www.EMSL.com wallingfordlab@emsl.com

EMSL Order:	241401923
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ProjectID:	

Attn: **Kevin Bogue**
Facility Support Services, LLC
2685 State Street

Hamden, CT 06517

Phone:	(203) 288-1281
Fax:	(203) 248-4409
Received:	05/22/14 4:00 PM
Analysis Date:	5/29/2014
Collected:	5/21/2014

Project: **54 RAINBOW RD/22214-2240**

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

			Non-Asbestos				Asbestos	
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**%**	**Type**
22214052113A *241401923-0025*	2nd floor - joint compound #2	Tan/White/Yellow Non-Fibrous Homogeneous	<1%	Cellulose	98%	Non-fibrous (other)	**2%**	**Chrysotile**
22214052113B *241401923-0026*	2nd floor - joint compound #2	Tan Non-Fibrous Homogeneous			98%	Non-fibrous (other)	**2%**	**Chrysotile**

Analyst(s)

Kristin Lopez (13)
Santino Ferraro (13)

Gloria V. Oriol, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Wallingford, CT NVLAP Lab Code 200700-0,

Initial report from 05/30/2014 09:24:12

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 24140192 3

EMSL Analytical, Inc.
29 North Plains Hwy
Unit 4
Wallingford, CT 06492
PHONE: (203) 284-5948
FAX: (203) 284-5978

Company: Facility Support Services, LLC	**EMSL-Bill to:** ☐ Different ☑ Same If Bill to is Different note instructions in Comments**
Street: 2685 State Street	*Third Party Billing requires written authorization from third party*
City: Hamden **State/Province:** CT	**Zip/Postal Code:** 06517 **Country:** United States
Report To (Name): Kevin Bogue	**Telephone #:** 203-288-1281
Email Address: kbogue.fss@snet.net	**Fax #:** 203-248-4409 **Purchase Order:**
Project Name/Number: 54 Rainbow Rd/22214-2240	**Please Provide Results:** ☐ FAX ☑ E-mail ☐ Mail
U.S. State Samples Taken: CT	**Connecticut Samples:** ☐ Commercial ☒ Residential

Turnaround Time (TAT) Options* – Please Check

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

**For TEM Air 3 hr through 6 hr, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air ☐ Check if samples are from NY
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☒ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ **4-4.5hr TAT (AHERA only)**
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM CARB 435 - A (0.25% sensitivity)
- ☐ PLM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - C (0.01% sensitivity)
- ☐ TEM Qual. via Filtration Technique
- ☐ TEM Qual. via Drop-Mount Technique

Other:
- ☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group** **Filter Pore Size (Air Samples):** ☐ 0.8µm ☐ 0.45µm

Samplers Name: Chris Hudacek **Samplers Signature:** [signature]

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
	SEE ATTACHED		

RECEIVED MAY 22 2014 By 16:00

Client Sample # (s): - **Total # of Samples:** 26

Relinquished (Client): [signature] **Date:** 5/22/14 **Time:**

Received (Lab): **Date:** **Time:**

Comments/Special Instructions:

Page 1 of 3 pages

FACILITY SUPPORT SERVICES, LLC

Asbestos Sampling Log

24140192 3

CLIENT: Martinez-Couch DATE: 5/21/14

LOCATION: 54 Rainbow Road SAMPLED BY: C. Hudacek

SAMPLE ID	LOCATION	DESCRIPTION
2221405 21 01A	Roof	Shingle (Top layer)
B	↓	↓
02A	↓	Shingle (2nd layer)
B	↓	↓
03 A	↓	Shingle (3rd layer from top)
B	↓	↓
04 A	↓	Shingle (Bottom Layer)
B	↓	↓
05 A	Basement - Floor	Wood pattern Selfadhesive floor tile
B	↓	↓
06 A	↓	Green self-adhesive tiles
B	↓	↓
07 A	↓	Red floor tile
B	↓	↓
08 A	↓	Mastic assoc. w/ 07
B	↓	↓
09 A	Basement-At exit	Sheetrock
B	↓	↓
10 A	↓	Joint Compound
B	↓	↓

RECEIVED MAY 22 2014 By 16:02

2685 STATE ST. HAMDEN, CT 06517
PH: 203-288-1281 FAX: 203-248-4409

FACILITY SUPPORT SERVICES, LLC 241401923

Asbestos Sampling Log

CLIENT: Martinez-Couch DATE: 5/21/14

LOCATION: 54 Rainbow Rd. SAMPLED BY: C. Hudacek

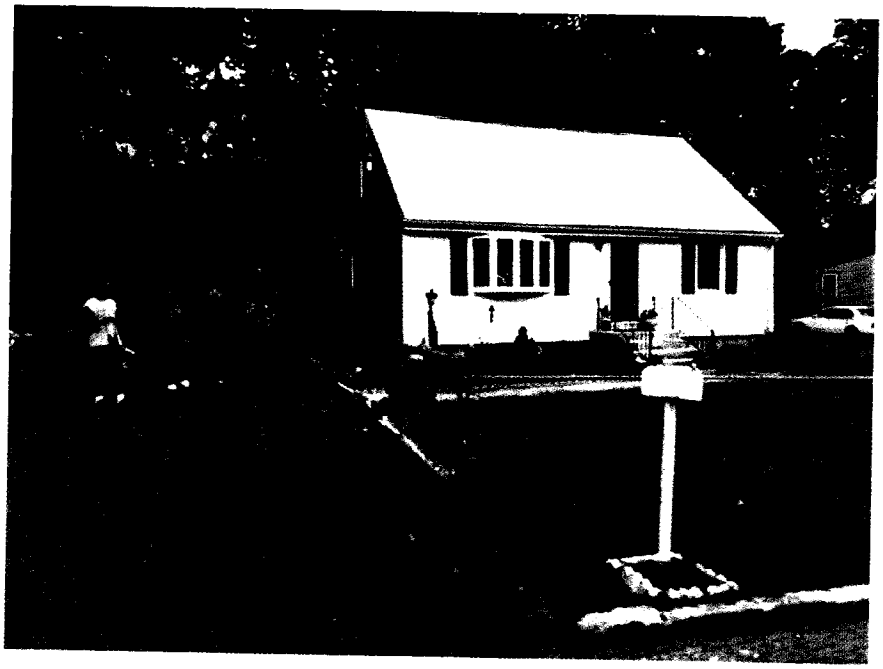
SAMPLE ID	LOCATION	DESCRIPTION
222140521 11A	2nd floor	Insulation Paper adhesive
B	↓	↓
12A		Sheetrock #2
B		↓
13A		Joint compound #2
B	↓	↓

RECEIVED MAY 22 2014 By 16:00

2685 STATE ST. HAMDEN, CT 06517
PH: 203-288-1281 FAX: 203-248-4409

LEAD BASED PAINT INSPECTION
REPORT OF FINDINGS
OF:

54 RAINBOW ROAD
BRIDGEPORT, CONNECTICUT



DATE:
May 21, 2014

PREPARED BY:
GILBERTCO LEAD INSPECTIONS LLC
287 MAIN STREET
ANSONIA, CONNECTICUT 06401

GILBERTCO
LEAD INSPECTIONS, LLC

"LEAD BASED PAINT SPECIALIST"

May 21, 2014

Job 9928-5-54

Kevin Bogue, LEP, CHMM
Facility Support Services, LLC
2685 State Street
Hamden, Connecticut 06517

Re: Lead Based Paint Inspection: 54 Rainbow Road, Bridgeport, Connecticut
Lorna Hewitt- Applicant # 2240

Gilbertco Lead Inspections LLC performed a limited XRF inspection for the presence of lead based paint at 54 Rainbow Road, Bridgeport, Connecticut. The inspection was requested by Facility Support Services in response to distribution of HUD funds given to CT DOH for Storm Sandy repair work.

The site inspected consists of a single family, cape style home built about 1964. The home is vinyl sided with vinyl replacement windows throughout, with the exception of the second floor bedrooms. There are no children under the age of six currently residing here.

In accordance with HUD/EPA guidance issued June 26, 1996, the Scitec Map 4 Spectrum Analyzer was used in the "Unlimited" assaying mode. This enables the equipment to accurately determine whether the result is "Positive", above the 1.0 mg/cm2 action level or "Negative", below the action level regardless of precision or operator bias. In accordance with the above guidance, values of 0.91 mg/cm2 through 1.19 mg/cm2 are considered "Inconclusive", meaning the value level of lead in paint was so close to the 1.0 mg/cm2 action level that further analysis by XRF would not result in a "Positive" or "Negative" answer. Only laboratory analysis of the paint film can determine actual values in this range. Chip sampling of inconclusive was not included in the scope of this report, therefore, any results above 0.9 mg/cm2 are considered positive. Results are arranged floor plan style with the substrate and condition noted. Orientation of rooms places side 'one' as street side, with side 'two' to the left, side 'three' opposite, and wall 'four' to the right. Rooms were tested in a clockwise pattern.

287 Main Street
Ansonia, CT 06401
203-732-2615 - FAX 866-437-8191
Toll Free In CT Only 1-800-959-2985

CERTIFICATION
LEAD IN PAINT RESULTS

AGENCY:	GILBERTCO LEAD INSPECTIONS LLC 287 MAIN STREET ANSONIA, CONNECTICUT 06401
PROJECT ADDRESS:	54 RAINBOW ROAD BRIDGEPORT, CONNECTICUT
PROJECT NUMBER:	9928-5-54
TEST DATE:	MAY 21, 2014
REQUIREMENTS:	CHAPTER 7 HUD GUIDELINES LEAD INSPECTION- SURFACE BY SURFACE
INSTRUMENTATION:	SCITEC MAP4 PORTABLE X-RAY (BRUKER HANDHELD) FLUOROSCOPE SPECTRUM ANALYZER (XRF) COBALT 57 SOURCE
REPORT MEDIUM:	MG PB/CM2 (MILLIGRAMS OF LEAD PER SQUARE CENTIMETER)
CALIBRATION:	TO MEASURE LEAD K-SHELL EMISSIONS. FACTORY CALIBRATED WITH HUD APPROVED REFERENCE STANDARDS. CALIBRATION FIELD CHECKED HOURLY AS RECOMMENDED BY MANUFACTURER
OPERATORS CERTIFICATION:	LEAD CONSULTANT CONTRACTOR-CC270 LEAD INSPECTOR RISK ASSESSOR- IR 1172 LEAD ABATEMENT SUPERVISOR- 2383

I hereby certify to the best of my knowledge and capabilities that this report reflects the true lead content of the surfaces tested in this report on this date.

Maureen O'Neill 5/21/2014

In regards to the above mentioned property, *only one area of lead based paint hazard was identified.* This areas was the second floor window .A lead based paint hazard is "any condition that causes lead exposure from lead-contaminated dust, lead contaminated soil, or lead-contaminated paint that is deteriorated or present in accessible surfaces, friction surfaces, or impact surfaces that would result in adverse human health effects...". Several areas tested positive for lead based paint but are currently in an intact condition. These areas should be placed on a Management Plan and monitored annually for signs of deterioration or paint breakdown. *See attached* . In April 2010, a new EPA regulation requires that any contractor who disturbs more than six square feet of painted surface per room or does window replacement must be certified as a Renovate Right Contractor. Homeowners are allowed to do their own renovation but are not exempt from providing renovation notices or posting informational signs. Further information regarding Renovate Right may be obtained at www.epa.gov/lead/pubs/renovation or by calling the National Lead Information Center at 1-800-424-LEAD (5323).

Lead in dust was not included in the scope of this report. Only laboratory analysis can insure that no lead dust hazards remain after renovations or everyday use of the home.

Although soil was not tested for lead, it can be presumed positive unless proven otherwise. Vegetable plants should not be planted near the perimeter of the house or in water runoff areas. Children should not be allowed to play in bare soil areas adjacent to the house. Asphalt, bushes, mulch, or good quality grass covering are acceptable deterrents.

Please feel free to call if any questions arise,

Maureen Monaco

Maureen Monaco
Director of Operations
Consultant Contractor #270
Lead Inspector Risk Assessor #1172
Lead Abatement Supervisor #2383

54 Rainbow Road, Bridgeport, CT
May 21, 2014

Room Type	Room #	Wall #	Component	Substraet	Condition	K Shell	Decision
Calibration						1.14	okay
Exterior	1	3	Threshold	Wood	Intact	-0.13	Negative
Exterior	1	3	Door Jamb	Wood	Intact	-0.1	Negative
Exterior	1	3	Door Casing	Wood	Intact	-0.42	Negative
Exterior	1	3	Deck Floor	Wood	Intact	-0.53	Negative
Exterior	1	3	Deck Railing	Wood	Intact	-0.38	Negative
Exterior	1	3	Spindle	Wood	Intact	0.45	Negative
Exterior	1	3	Stair Tread	Wood	Non-intact	0.23	Negative
Exterior	1	3	Stair Riser	Wood	Intact	0.04	Negative
Exterior	1	3	Wall	Masonry	Non-intact	0	Negative
Exterior	1	2	Wall	Masonry	Non-intact	0.1	Negative
Exterior	1	2	Bilco Door	Metal	Non-intact	0.38	Negative
Exterior	1	1	Wall	Masonry	Non-intact	-0.05	Negative
Exterior	1	1	Kickplate	Wood	Non-intact	-0.47	Negative
Exterior	1	1	Railing	Metal	Non-intact	0.16	Negative
Exterior	1	4	Wall	Masonry	Non-intact	-0.22	Negative
Living Room	2	1	Door	Wood	Stain/varnish	0.06	Negative
Living Room	2	1	Door Casing	Wood	Intact	0.1	Negative
Living Room	2	1	Wall	Sheetrk	Intact	-0.12	Negative
Living Room	2	1	Radiator	Metal	Intact	0.07	Negative
Living Room	2	1	Window Trim	Wood	Intact	-0.25	Negative
Living Room	2	1	Window Sill	Wood	Intact	-0.02	Negative
Living Room	2	3	Wall	Sheetrk	Intact	-0.08	Negative
Living Room	2	3	Door Casing	Wood	Intact	0.09	Negative
Living Room	2	3	Baseboard	Wood	Intact	-0.04	Negative
Living Room	2	4	Wall	Sheetrk	Intact	0.07	Negative
Living Room	2	4	Stair Tread	Wood	Stain/varnish	0.04	Negative
Living Room	2	4	Stair Riser	Wood	Intact	-0.32	Negative
Living Room	2	4	Satir stringer	Wood	Intact	0.2	Negative
Living Room	2	4	Railing	Wood	Stain/varnish	0.33	Negative
Living Room	2	1	Newel Post	Wood	Stain/varnish	0.2	Negative
Living Room	2	1	Ceiling	Sheetrk	Intact	0.08	Negative
Living Room	2	1	Ceiling Trim	Wood	Intact	-0.07	Negative
Living Room	2	1	Floor	Wood	Stain/varnish	-0.01	Negative
Kitchen	3	1	Door Casing	Wood	Intact	-0.34	Negative
Kitchen	3	1	Door Jamb	Wood	Intact	-0.05	Negative
Kitchen	3	1	Wall	Sheetrk	Intact	-0.26	Negative
Kitchen	3	1	Wall	Sheetrk	Intact	-0.03	Negative
Kitchen	3	1	Cabinet	Wood	Stain/varnish	0.01	Negative
Kitchen	3	1	Ceiling	Sheetrk	Intact	0.18	Negative
Kitchen	3	2	Wall	Sheetrk	Intact	-0.34	Negative
Kitchen	3	2	Window Sill	Wood	Intact	-0.08	Negative

Kitchen	3	2	Window Trim	Wood	Intact	-0.07	Negative
Kitchen	3	1	Ceiling	Sheetrk	Intact	0.19	Negative
Kitchen	3	3	Wall	Sheetrk	Intact	-0.11	Negative
Kitchen	3	3	Door Casing	Wood	Intact	-0.13	Negative
Kitchen	3	3	Door	Metal	Intact	0.06	Negative
Kitchen	3	3	Window Trim	Wood	Intact	0.11	Negative
Kitchen	3	3	Window Sill	Wood	Intact	0.01	Negative
Kitchen	3	3	Baseboard	Wood	Intact	-0.47	Negative
Kitchen	3	4	Wall	Sheetrk	Intact	-0.16	Negative
Kitchen	3	4	Radiator	Metal	Intact	0.37	Negative
Bathroom	4	1	Door	Other	Intact	-0.06	Negative
Bathroom	4	1	Door Jamb	Wood	Intact	-0.1	Negative
Bathroom	4	1	Door Casing	Wood	Intact	0.19	Negative
Bathroom	4	1	Wall	Sheetrk	Intact	-0.07	Negative
Bathroom	4	2	Wall	Sheetrk	Intact	-0.19	Negative
Bathroom	4	4	Wall	Sheetrk	Intact	0.09	Negative
Bathroom	4	4	Radiator	Metal	Intact	0.03	Negative
Bathroom	4	1	Ceiling	Sheetrk	Intact	-0.11	Negative
Bathroom	4	2	Cabinet	Wood	Intact	-0.18	Negative
Rear Right BR	5	2	Door	Other	Intact	-0.12	Negative
Rear Right BR	5	2	Door Jamb	Wood	Intact	0.31	Negative
Rear Right BR	5	2	Door Casing	Wood	Intact	0.09	Negative
Rear Right BR	5	2	Wall	Sheetrk	Intact	-0.01	Negative
Rear Right BR	5	2	Closet Door	Wood	Intact	-0.31	Negative
Rear Right BR	5	2	Clo Dr Csng	Wood	Intact	0.19	Negative
Rear Right BR	5	3	Wall	Sheetrk	Intact	0.01	Negative
Rear Right BR	5	3	Window Trim	Wood	Intact	0.22	Negative
Rear Right BR	5	3	Window Sill	Wood	Intact	-0.24	Negative
Rear Right BR	5	3	Baseboard	Wood	Intact	-0.37	Negative
Rear Right BR	5	3	Floor	Wood	Stain/varnish	0.01	Negative
Rear Right BR	5	4	Wall	Sheetrk	Intact	-0.01	Negative
Rear Right BR	5	4	Window Trim	Wood	Intact	-0.06	Negative
Rear Right BR	5	4	Window Sill	Wood	Intact	-0.19	Negative
Rear Right BR	5	4	Wall	Sheetrk	Intact	-0.06	Negative
Rear Right BR	5	4	Wall	Sheetrk	Intact	-0.06	Negative
Front Right BR	6	3	Door	Other	Intact	-0.38	Negative
Front Right BR	6	3	Door Casing	Wood	Intact	0.22	Negative
Front Right BR	6	3	Wall	Sheetrk	Intact	-0.06	Negative
Front Right BR	6	3	Closet Door	Wood	Intact	0.23	Negative
Front Right BR	6	3	Clo Dr Csng	Wood	Intact	0.09	Negative
Front Right BR	6	3	Baseboard	Wood	Intact	-0.34	Negative
Front Right BR	6	4	Wall	Sheetrk	Intact	-0.04	Negative
Front Right BR	6	4	Window Trim	Wood	Intact	-0.2	Negative
Front Right BR	6	4	Window Sill	Wood	Intact	0.18	Negative

Front Right BR	6	1	Wall	Sheetrk	Intact	0.21	Negative
Front Right BR	6	1	Window Sill	Wood	Intact	0.18	Negative
Front Right BR	6	1	Window Trim	Wood	Intact	-0.01	Negative
Front Right BR	6	1	Radiator	Metal	Intact	0.24	Negative
Front Right BR	6	2	Wall	Sheetrk	Intact	-0.22	Negative
Front Right BR	6	2	Ceiling	Sheetrk	Intact	-0.21	Negative
Front Right BR	6	2	Floor	Wood	stain/varnish	0.01	Negative
2nd Fl Left BR	7	4	Door	Other	Intact	-0.11	Negative
2nd Fl Left BR	7	4	Door Jamb	Wood	Intact	-0.09	Negative
2nd Fl Left BR	7	4	Door Casng	Wood	Intact	0.09	Negative
2nd Fl Left BR	7	4	Wall	Sheetrk	Intact	0.14	Negative
2nd Fl Left BR	7	4	Baseboard	Wood	Intact	0.01	Negative
2nd Fl Left BR	7	3	Wall	Sheetrk	Intact	0.26	Negative
2nd Fl Left BR	7	3	Baseboard	Wood	Intact	0.14	Negative
2nd Fl Left BR	7	1	Ceiling	Sheetrk	Non-intact	-0.3	Negative
2nd Fl Left BR	7	2	Wall	Sheetrk	Intact	0.04	Negative
2nd Fl Left BR	7	2	Radiator	Metal	Intact	0.09	Negative
2nd Fl Left BR	7	2	Window Sill	Wood	Intact	0.17	Negative
2nd Fl Left BR	7	2	Window Sash	Wood	Intact	0.1	Negative
2nd Fl Left BR	7	2	Window Trim	Wood	Intact	0.17	Negative
2nd Fl Left BR	7	2	Windo Well	Wood	Non-intact	1.15	Inconclusive
2nd Fl Left BR	7	2	Exterior Sash	Wood	Non-intact	1.29	Positive
2nd Fl Left BR	7	2	Windows Well	Wood	Non-intact	0.98	Inconclusive
2nd Fl Left BR	7	2	Window Sash	Wood	Intact	0.19	Negative
2nd Fl Left BR	7	1	Wall	Sheetrk	Intact	0.01	Negative
2nd Fl Left BR	7	1	Baseboard	Wood	Intact	-0.34	Negative
2nd Fl Left BR	7	3	Floor	Wood	Stain/varnish	-0.63	Negative
2nd Fl Left BR	7	3	Ceiling	Wood	Stain/varnish	-0.26	Negative
2nd Fl Left BR	7	4	Closet Door	Wood	Intact	-0.13	Negative
2nd Fl Left BR	7	4	Clo Dr Csng	Wood	Intact	-0.24	Negative
2nd Fl Left BR	7	4	Shelf	Wood	Intact	-0.23	Negative
2nd Fl Left BR	7	4	Shelf Support	Wood	Intact	-0.02	Negative
2nd Fl Right BR	8	2	Door	Other	Intact	-0.44	Negative
2nd Fl Right BR	8	2	Door Casing	Wood	Intact	-0.25	Negative
2nd Fl Right BR	8	2	Door Jamb	Wood	Intact	0.01	Negative
2nd Fl Right BR	8	2	Wall	Sheetrk	Intact	-0.38	Negative
2nd Fl Right BR	8	3	Wall	Sheetrk	Intact	0.2	Negative
2nd Fl Right BR	8	2	Ceiling	Sheetrk	Intact	-0.15	Negative
2nd Fl Right BR	8	3	Baseboard	Wood	Intact	0.1	Negative
2nd Fl Right BR	8	4	Wall	Sheetrk	Intact	0.19	Negative
2nd Fl Right BR	8	4	Window Sill	Wood	Intact	-0.12	Negative
2nd Fl Right BR	8	4	Window Sash	Wood	Intact	-0.18	Negative
2nd Fl Right BR	8	4	Window Trim	Wood	Intact	0.05	Negative
2nd Fl Right BR	8	4	Window Well	Wood	Non-intact	-0.34	Negative
2nd Fl Right BR	8	4	Ext Wnd sash	Wood	Non-intact	-0.07	Negative

2nd Fl Right BR	8	4	Window Jamb	Wood	Non-intact	-0.47	Negative
2nd Fl Right BR	8	4	Radiator	Metal	Intact	0.15	Negative
2nd Fl Right BR	8	1	Wall	Sheetrk	Intact	0.15	Negative
2nd Fl Right BR	8	1	Closet Door	Wood	Intact	0.17	Negative
2nd Fl Right BR	8	1	Clo Dr Csng	Wood	Intact	0.04	Negative
2nd Fl Right BR	8	1	Ceiling	Sheetrk	Intact	-0.31	Negative
2nd Fl Right BR	8	2	Wall	Sheetrk	Intact	0.13	Negative
2nd Fl Right BR	8	2	Closet Door	Wood	Intact	-0.33	Negative
2nd Fl Right BR	8	2	Clo Dr CSng	Wood	Intact	-0.21	Negative
2nd Fl Right BR	8	2	Shelf	Wood	Intact	-0.11	Negative
2nd Fl Right BR	8	2	Shelf Support	Wood	Intact	0.15	Negative
2nd Fl Right BR	8	1	Floor	Wood	Stain/varnish	-0.28	Negative
Basement	9	4	Wall	Sheetrk	Intact	-0.11	Negative
Basement	9	4	Wall	Wood	Non-intact	0.4	Negative
Basement	9	4	Trim	Wood	Non-intact	0.04	Negative
Basement	9	1	Ceiling	Sheetrk	Intact	0.15	Negative
Basement	9	1	Railing	Wood	Non-intact	0.05	Negative
Basement	9	1	Stair Tread	Other	Intact	-0.03	Negative
Basement	9	1	Stair Riser	Wood	Non-intact	0.13	Negative
Basement	9	1	Railing	Wood	Stain/varnish	-0.11	Negative
Basement	9	1	Spindle	Wood	Intact	0.23	Negative
Basement	9	1	Post/column	Wood	Stain/varnish	-0.09	Negative
Basement	9	1	Ceiling	Sheetrk	Intact	0.32	Negative
Basement	9	1	Wall	Wood	Intact	-0.14	Negative
Basement	9	1	Radiator	Wood	Intact	-0.21	Negative
Basement	9	2	Wall	Sheetrk	Intact	0.05	Negative
Basement	9	2	Door	Wood	Intact	0.21	Negative
Basement	9	2	Door Casing	Wood	Intact	0.13	Negative
Basement	9	1	Lolly column	Metal	Non-intact	0.85	Negative
Basement	9	1	Ceiling	Sheetrk	Intact	0.07	Negative
Basement	9	3	Door	Wood	Intact	-0.14	Negative
Basement	9	3	Door Casing	Wood	Intact	0.4	Negative
Basement	9	3	Door Jamb	Wood	Intact	0.09	Negative
Basement	9	3	Closet Door	Wood	Intact	-0.25	Negative
Basement	9	3	Clo Dr Csng	Wood	Intact	-0.2	Negative
Basement	9	3	Floor	Wood	Intact	0.19	Negative
Basement	9	3	Wall	Masonry	Non-intact	-0.19	Negative
Basement	9	1	Floor	Masonry	Non-intact	-0.28	Negative

MANAGEMENT PLAN

FOR

INTACT LEAD-BASED PAINT CONTAINING SURFACES

As a homeowner, you should know that painted surfaces throughout this house have been found to contain toxic levels of lead. These surfaces do not have to be abated as they are presently intact. Lead paint and lead dust pose a health risk and are especially dangerous to young children and pregnant woman. The inspection report lists areas that contain lead based paint. Lead paint is presumed to exist on all similarly painted surfaces whether tested or not. If currently intact surfaces become nonintact then lead hazard remediation procedures must be invoked.

As the homeowner, you are responsible for observing and monitoring all areas that have been identified or presume to contain lead based paint. Further testing and possible abatement may be needed if any of the surfaces are to be disturbed during renovations or if the surfaces become damaged. Defective surfaces are characterized by cracking, blistering, chalking or peeling paint. If any of these conditions arise, you should contact a qualified lead abatement contractor, a Renovate Right Certified Contractor or the local health department. Do not attempt to remove lead containing surfaces yourself as the lead dust that may arise is extremely hazardous.

As the homeowner, you are responsible for warning all persons entering your home that lead based paint is present. This includes tenants, visitors, etc. In April 2010, a new EPA regulation requires that any contractor who disturbs more than six square feet of painted surface must be certified as a Renovate Right Contractor. Homeowners are allowed to do their own renovation but are not exempt from providing renovation notices or posting informational signs. Further information regarding Renovate Right may be obtained at www.epa.gov/lead/pubs/renovation or by calling the National Lead Information Center at 1-800-424-LEAD (5323).

Children are especially susceptible to lead hazards. As with any lead containing surface, children should not be allowed to mouth or chew on woodwork. Hygiene practices must include hand washing before meals.

If any child is found to have an elevated blood lead level then you must notify the local health department.

Disclosure of Information on Lead-Based Paint and/or Lead-Based Paint Hazards

Lead Warning Statement

Housing built before 1978 may contain lead-based paint. Lead from paint, paint chips, and dust can pose health hazards if not managed properly. Lead exposure is especially harmful to young children and pregnant women. Before renting pre-1978 housing, lessors must disclose the presence of known lead-based paint and/or lead-based paint hazards in the dwelling. Lessees must also receive a federally approved pamphlet on lead poisoning prevention.

Lessor's Disclosure

(a) Presence of lead-based paint and/or lead-based paint hazards (check (i) or (ii) below):

(i) _____ Known lead-based paint and/or lead-based paint hazards are present in the housing (explain).

_____

_____

(ii) _____ Lessor has no knowledge of lead-based paint and/or lead-based paint hazards in the housing.

(b) Records and reports available to the lessor (check (i) or (ii) below):

(i) _____ Lessor has provided the lessee with all available records and reports pertaining to lead-based paint and/or lead-based paint hazards in the housing (list documents below).

_____

_____

(ii) _____ Lessor has no reports or records pertaining to lead-based paint and/or lead-based paint hazards in the housing.

Lessee's Acknowledgment (initial)

(c) _____ Lessee has received copies of all information listed above.

(d) _____ Lessee has received the pamphlet *Protect Your Family from Lead in Your Home.*

Agent's Acknowledgment (initial)

(e) _____ Agent has informed the lessor of the lessor's obligations under 42 U.S.C. 4852d and is aware of his/her responsibility to ensure compliance.

Certification of Accuracy

The following parties have reviewed the information above and certify, to the best of their knowledge, that the information they have provided is true and accurate.

Lessor	Date	Lessor	Date
Lessee	Date	Lessee	Date
Agent	Date	Agent	Date

80 Lupes Drive
Stratford, CT 06615

Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet1@cetlabs.com

Client: Mr. Kevin Bogue
Facility Support Services
2685 State Street
Hamden, CT 06517

Analytical Report
CET# 4050524

Report Date: May 30, 2014
Project: 22214
Project Number: SS Sandy, 54 Rainbow Rd

Connecticut Laboratory Certificate: PH 0116
Massachussetts laboratory Certificate.: M-CT903
Rhode Island Certification: 199

New York Certification: 11982
Florida Laboratory Certification: E871064

SAMPLE SUMMARY

The sample(s) were received at 4.4°C.

This report contains analytical data associated with following samples only.

Sample ID	Laboratory ID	Matrix	Collection Date/Time	Receipt Date
PCB-01 (Basement Mastic)	4050524-01	Solid	5/21/2014	05/22/2014

Client Sample ID PCB-01 (Basement Mastic)
Lab ID: 4050524-01

PCBs by Soxhlet
Method: EPA 8082A

Analyst: CA
Matrix: Solid

Analyte	Result (mg/kg (As Rec))	RL (mg/kg (As Rec))	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
PCB-1016	ND	0.80	4	EPA 3540C	B4E2822	05/28/2014	05/29/2014 17:46	
PCB-1221	ND	0.80	4	EPA 3540C	B4E2822	05/28/2014	05/29/2014 17:46	
PCB-1232	ND	0.80	4	EPA 3540C	B4E2822	05/28/2014	05/29/2014 17:46	
PCB-1242	ND	0.80	4	EPA 3540C	B4E2822	05/28/2014	05/29/2014 17:46	
PCB-1248	ND	0.80	4	EPA 3540C	B4E2822	05/28/2014	05/29/2014 17:46	
PCB-1254	ND	0.80	4	EPA 3540C	B4E2822	05/28/2014	05/29/2014 17:46	
PCB-1260	ND	0.80	4	EPA 3540C	B4E2822	05/28/2014	05/29/2014 17:46	
PCB-1268	ND	0.80	4	EPA 3540C	B4E2822	05/28/2014	05/29/2014 17:46	
PCB-1262	ND	0.80	4	EPA 3540C	B4E2822	05/28/2014	05/29/2014 17:46	
Surrogate: TCMX	*76.0 %*	*50 - 150*			B4E2822	05/28/2014	*05/29/2014 17:46*	
Surrogate: DCB	*72.1 %*	*50 - 150*			B4E2822	05/28/2014	*05/29/2014 17:46*	

CET #:4050524
Project: 22214
Project Number: SS Sandy, 54 Rainbow Rd

QUALITY CONTROL SECTION

Batch B4E2822 - EPA 8082A

Analyte	Result (mg/kg (As Rec))	RL (mg/kg (As Rec))	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B4E2822-BLK1)					Prepared: 5/28/2014 Analyzed: 5/29/2014				
PCB-1016	ND	0.20							
PCB-1221	ND	0.20							
PCB-1232	ND	0.20							
PCB-1242	ND	0.20							
PCB-1248	ND	0.20							
PCB-1254	ND	0.20							
PCB-1260	ND	0.20							
PCB-1268	ND	0.20							
PCB-1262	ND	0.20							
Surrogate: TCMX					*92.0*	*50 - 150*			
Surrogate: DCB					*91.4*	*50 - 150*			
LCS (B4E2822-BS1)					Prepared: 5/28/2014 Analyzed: 5/29/2014				
PCB-1016	0.831	0.20	1.000		83.1	50 - 150			
PCB-1260	0.895	0.20	1.000		89.5	50 - 150			
Surrogate: TCMX					*97.5*	*50 - 150*			
Surrogate: DCB					*136*	*50 - 150*			
Calibration Check (B4E2822-CCV1)					Prepared: 5/28/2014 Analyzed: 5/29/2014				
PCB-1016	1.04	0.20	1.000		104	80 - 120			
PCB-1260	1.06	0.20	1.000		106	80 - 120			
Surrogate: TCMX					*112*	*50 - 150*			
Surrogate: DCB					*99.4*	*50 - 150*			

80 Lupes Drive
Stratford, CT 06615

Tel: (203) 377-9984
Fax: (203) 377-9952
email: cet1@cetlabs.com

Quality Control Definitions and Abbreviations

Internal Standard (IS)	An Analyte added to each sample or sample extract. An internal standard is used to monitor retention time, calculate relative response, and quantify analytes of interest.
Surrogate Recovery	The % recovery for non-tarer organic compounds that are spiked into all samples. Used to determine method performance.
Continuing Calibration	An analytical standard analyzed with each set of samples to verify initial calibration of the system.
Batch	Samples that are analyzed together with the same method, sequence and lot of reagents within the same time period.
ND	Not detected
RL	Reporting Limit
Dilution	Multiplier added to detection levels (MDL) and/or sample results due to interferences and/or high concentration of target compounds.
Duplicate	Result from the duplicate analysis of a sample.
Result	Amount of analyte found in a sample.
Spike Level	Amount of analyte added to a sample
Matrix Spike Result	Amount of analyte found including amount that was spiked.
Matrix Spike Dup	Amount of analyte foun in duplicate spikes including amount that was spike.
Matrix Spike % Recovery	% Recovery of spiked amount in sample.
Matrix Spike Dup % Recovery	% Recovery of spiked duplicate amount in sample.
RPD	Relative percent difference between Matrix Spike and Matrix Spike Duplicate.
Blank	Method Blank that has been taken through all steps of the analysis.
LCS % Recovery	Laboratory Control Sample percent recovery. The amount of analyte recovered from a fortified sample.
Recovery Limits	A range within which specified measurements results must fall to be compliant.
CC	Calibration Verification

Flags:

- H- Recovery is above the control limits
- L- Recovery is below the control limits
- B- Compound detected in the Blank
- P- RPD of dual column results exceeds 40%
- #- Sample result too high for accurate spike recovery.

Connecticut Laboratory Certification PH0116
Massachussets Laboratory Certification M-CT903
Rhode Island Certification 199

New York Certification 11982
Florida Laboratory Certification E871064

Questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,

David Ditta
Laboratory Director

Report Comments:

ND is None Detected at the specified detection limit
All analyses were performed in house unless a Reference Laboratory is listed.
Samples will be disposed of 30 days after the report date.
Sample Result Flags:
E- The result is estimated, above the calibration range.
H- The surrogate recovery is above the control limits.
L- The surrogate recovery is below the control limits.
B- The compound was detected in the laboratory blank.
P- The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
D- The RPD between the sample and the sample duplicate is high. Sample Homogenity may be a problem.
+- The Surrogate was diluted out.
All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.
Complete Environmental Testing is only responsible for the certified testing and is not directly responsible for the integrity of the sample before laboratory receipt.

CET

COMPLETE ENVIRONMENTAL TESTING, INC.

4050524

CET # _____

Volatile Soils Only:

Date and Time in Freezer
Client:
CET:

OF CUSTODY RECORD

80 Lupes Drive
Stratford, CT 06615
Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet1@cetlabs.com

Matrix: A=Air, S=Soil, W=Water, DW=Drinking W., C=Cassette, Solid, Wipe, Other (Specify)

Sample ID	Date/Time	Matrix	Same Day *	Next Day *	2-3 Days *	Std (5-7 Days)	8260 CT List	8260 Aromatics	8260 Halogens	SPLP 8260	TCLP 8260	CT ETPH	8270 CT List	8270 PNAs	PCBs Soxhlet	Pesticides	Herbicides	13 Priority Poll	8 RCRA	TOTAL	TCLP	SPLP	Field Filtered	Lab To Filter	Additional Analysis	TOTAL # OF CONT.	NOTE #
PCB-01 (Basement Mastic)	5/21/14	Solid				X									X											1	

SECTION 010000

SUMMARY OF WORK

General Conditions

The following provisions are intended to supplement and complement each other and shall, where possible, be thus interpreted. If, however, any provision of the Project Documents irreconcilably conflicts with one or more of the following provisions, the provision imposing the greater duty or obligation on the Contractor shall govern.

1. Contractor shall supply all materials (except where indicated), labor, tools, equipment, and supplies required to complete the total Project in accordance with the drawings, specifications and other Contract Documents. Prior to beginning Work, Contractor shall list any deficiencies in scope and report to the DOH.

2. Contractor shall provide all coordination of all Work with Owner, Owner Vendors, DOH, DOH Agencies as required for project completion.

3. Contractor will develop a comprehensive logistics plan for all activities that affect the Owner.

4. Contractor is responsible on a daily basis to submit a Daily Construction Report (DCR) indicating subcontractors, total number of people working, description of Work completed that day, total hours worked that day, and any major deliveries.

5. Contractor shall secure and pay for a dumpster for all refuse and waste material. The dumpster location will be determined by the property Owner.

6. If required for the Project (as reasonably determined by Owner) Contractor shall erect and maintain dust-barriers to separate living areas from areas of construction.

7. In the event of a required utility shutdown, Contractor will diligently schedule work with the Owner. Contractor will give the Owner Project Manager at least three (3) days advance notice of any proposed utility shutdown.

8. Contractor shall comply with all of the legal regulations, including, but not limited to, OSHA safety regulations and regulations of municipal, city, local, and other government agencies having jurisdiction concerning the Work. Contractor shall give all notices and comply with all laws, ordinances, codes, rules and regulations bearing on the conduct of the Work. If Contractor performs any Work that is contrary to such laws, ordinances, codes, rules, and regulations, it shall make all changes to comply therewith and bear all costs arising therefrom.

9. All permits, required for any part of Contractor's Work, including those to be obtained in the Owner's name, shall be procured and paid for by Contractor.

GENERAL SCOPE

1. Inspect all areas, including those not affected by the repair scope, for damage to the finishes, fixtures, appliances, furnishings, etc. Document and report any and all damage to Owner for acceptance, and to DOH for notice, prior to commencing work.

2. Furnish and install any temporary supports or bracing as required to properly complete the work.

3. Provide all floor preparation as required including any flashing, skimming, or patching to provide for a suitable substrate for flooring work.

4. Contractor is responsible to detach and reset any items to properly perform all work, including but not limited to: trim, hardware, fixtures, door slabs, electrical components, mechanical components, etc.

PROJECT SCOPE OF WORK

1. ROOFING

1.1. Repair flashing to masonry chimney stack, matching existing.
   1.1.1. Provide detaching of items or any roof patching to properly perform all work.

2. GUTTERS & DOWNSPOUTS

2.1. Remove and dispose of damaged gutters and gutter guards.

2.2. Furnish and install new gutters and downspouts at missing or damaged locations.
   2.2.1. Make proper connections to existing gutter system that remains.

2.3. Furnish and install new gutter guards at damaged locations.

3. DOORS

3.1. Remove and dispose of damaged steel basement bulkhead door unit.

3.2. Furnish and install new steel basement bulkhead door unit to match existing.
   3.2.1. Provide any required curbing and/or sealing at door as required.

4. FINISHES

4.1. Remove and dispose of damaged drywall in master bedroom, second floor bedroom, and in basement.

4.2. Furnish and install new drywall in locations removed.

4.3. Prime and paint entire surfaces where drywall is removed.

5. ENVIRONMENTAL

5.1. Provide all necessary work, labor and materials required for Section 02 82 13
5.2. Provide all necessary work, labor and materials required for Section 02 83 13
5.3. Provide all necessary work, labor and materials required for Section 02 85 00
5.4. Provide all necessary work, labor and materials required for Section 33 21 13

SECTION 013300

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 - RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Specification Sections, apply to this Section.

1.2 - SUMMARY

A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

B. Related Requirements:
   1. Section 000115 "List of Drawings Sheets"

1.3 - DEFINITIONS

A. Action Submittals: Written and graphic information and physical samples that require Engineer's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."

B. Informational Submittals: Written and graphic information and physical samples that do not require Engineer's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

C. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.

D. Martinez Couch & Associates LLC (MCA) is the Project Manager and for this project. MCA will provide technical consultation, review of all materials, and project management. All references in this specification and in all other specifications references, MCA is Martinez Couch & Associates.
   1. All submittals shall be mailed to:
      Martinez Couch & Associates
      1084 Cromwell Avenue
      Rocky Hill, CT 06067
      Phone Number: (860) 436-4364
      Fax Number: (860) 436-4626

E. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

All submittals shall be submitted in PDF via electronic mail (email) to

1. recouch@martinezcouch.com

2. mranando@martinezcouch.com

1.4 - ACTION SUBMITTALS

A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by MCA and additional time for handling and reviewing submittals required by those corrections.
   1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
   2. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 10 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
   3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
      a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
   4. Format: Arrange the following information in a tabular format:
      a. Add information, such as scheduled dates for purchasing and installation and the activity or event number, if using a CPM construction schedule.
      b. Scheduled date for first submittal.
      c. Specification Section number and title.
      d. Submittal category: Action; informational.
      e. Name of subcontractor.
      f. Description of the Work covered.
      g. Scheduled date for MCA final release or approval.
      h. Scheduled date of fabrication.
      i. Retain three subparagraphs below if CPM construction schedules are required.
      j. Scheduled dates for purchasing.
      k. Scheduled dates for installation.
      l. Activity or event number.

1.5 - SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. MCA's Digital Data Files: Electronic digital data files of the Contract Drawings will not be provided by Engineer for Contractor's use in preparing submittals.
      a. Engineer makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
   1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
   2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
   3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
   4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
      a. Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Engineer's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
   1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Engineer will advise Contractor when a submittal being processed must be delayed for coordination.
   2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
   3. Resubmittal Review: Allow 15 days for review of each resubmittal.
   4. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Engineer and to Engineer's consultants, allow 15 days for review of each submittal. Submittal will be returned to Engineer before being returned to Contractor.

D. Paper Submittals: Place a permanent label or title block on each submittal item for identification.
   1. Indicate name of firm or entity that prepared each submittal on label or title block.
   2. Provide a space approximately 6 by 8 inches (150 by 200 mm) on label or beside title block to record Contractor's review and approval markings and action taken by Engineer.
   3. Include the following information for processing and recording action taken:
      a. Project name.
      b. Date.
      c. Name of Engineer.
      d. Name of Construction Manager.
      e. Name of Contractor.
      f. Name of subcontractor.
      g. Name of supplier.
      h. Name of manufacturer.
      i. Submittal number or other unique identifier, including revision identifier.
         1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 061000.01.A).
      j. Number and title of appropriate Specification Section.
      k. Drawing number and detail references, as appropriate.
      l. Location(s) where product is to be installed, as appropriate.
      m. Other necessary identification.

4. Additional Paper Copies: Unless additional copies are required for final submittal, and unless Engineer observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
5. Transmittal for Paper Submittals: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Engineer will discard submittals received from sources other than Contractor.
   a. Transmittal Form for Paper Submittals: Use AIA Document G810**.**
   b. Transmittal Form for Paper Submittals: Provide locations on form for the following information:
      1) Project name.
      2) Date.
      3) Destination (To:).
      4) Source (From:).
      5) Name and address of Engineer.
      6) Name of Contractor.
      7) Name of firm or entity that prepared submittal.
      8) Names of subcontractor, manufacturer, and supplier.
      9) Category and type of submittal.
      10) Submittal purpose and description.
      11) Specification Section number and title.
      12) Specification paragraph number or drawing designation and generic name for each of multiple items.
      13) Drawing number and detail references, as appropriate.
      14) Indication of full or partial submittal.
      15) Transmittal number numbered consecutively.
      16) Submittal and transmittal distribution record.
      17) Remarks.
      18) Signature of transmitter.

E. Options: Identify options requiring selection by Engineer.

F. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Engineer on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.

G. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
   1. Note date and content of previous submittal.
   2. Note date and content of revision in label or title block and clearly indicate extent of revision.
   3. Resubmit submittals until they are marked with approval notation from Engineer's action stamp.

H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

I. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Engineer action stamp.

PART 2 - PRODUCTS

2.1 - SUBMITTAL PROCEDURES

A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
   1. Action Submittals: Submit three paper copies of each submittal unless otherwise indicated. MCA will return two copies.
   2. Informational Submittals: Submit paper copies of each submittal unless otherwise indicated. Engineer will not return copies.
   3. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.

B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
   1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
   2. Mark each copy of each submittal to show which products and options are applicable.
   3. Include the following information, as applicable:
      a. Manufacturer's catalog cuts.
      b. Manufacturer's product specifications.
      c. Standard color charts.
      d. Statement of compliance with specified referenced standards.
      e. Testing by recognized testing agency.
      f. Application of testing agency labels and seals.
      g. Notation of coordination requirements.
      h. Availability and delivery time information.
   4. For equipment, include the following in addition to the above, as applicable:
      a. Wiring diagrams showing factory-installed wiring.
      b. Printed performance curves.
      c. Operational range diagrams.
      d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
   5. Submit Product Data before or concurrent with Samples.
   6. Submit Product Data in the following format:
      a. Three paper copies of Product Data unless otherwise indicated. Engineer will return two copies.

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data unless submittal based on Engineer's digital data drawing files is otherwise permitted.
   1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
      a. Identification of products.
      b. Schedules.
      c. Compliance with specified standards.
      d. Notation of coordination requirements.
      e. Notation of dimensions established by field measurement.
      f. Relationship and attachment to adjoining construction clearly indicated.

g. Seal and signature of professional engineer if specified.

2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm), but no larger than 30 by 42 inches (750 by 1067 mm)
3. Retain subparagraph below unless default submittal format specified elsewhere in this article applies.
4. Submit Shop Drawings in the following format:
   a. Three opaque copies of each submittal. Engineer will retain two copies; remainder will be returned.

D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
2. Identification: Attach label on unexposed side of Samples that includes the following:
   a. Generic description of Sample.
   b. Product name and name of manufacturer.
   c. Sample source.
   d. Number and title of applicable Specification Section.
   e. Specification paragraph number and generic name of each item.

3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
   a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
   b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
   a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line to Engineer. Engineer will provide sample to property owner for their use to select option to be used.
5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
   a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line to Engineer. Engineer will provide sample to property owner for their use to select option to be used.

E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:

1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
2. Manufacturer and product name, and model number if applicable.
3. Number and name of room or space.
4. Location within room or space.
5. Submit product schedule in the following format:

    a. Three paper copies of product schedule or list unless otherwise indicated. Engineer will return two copies.

F. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of Engineers and owners, and other information specified.

G. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.

H. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.

I. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

J. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.

K. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

L. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

M. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
1. Name of evaluation organization.
2. Date of evaluation.
3. Time period when report is in effect.
4. Product and manufacturers' names.
5. Description of product.
6. Test procedures and results.
7. Limitations of use.

N. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.

O. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.

P. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

2.2 – DELEGATED-DESIGN SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
   1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Engineer.

B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF electronic file and three paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
   1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 - CONTRACTOR'S REVIEW

A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Engineer.

B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 - ENGINEER'S ACTION

A. Action Submittals: Engineer will review each submittal, make marks to indicate corrections or revisions required, and return it. Engineer will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action, as follows:
   1. Action Code 1 - No Exceptions Taken

2. Action Code 2 - Correct as Noted
3. Action Code 3 - Revise and Resubmit
4. Action Code 4 - Rejected

B. Informational Submittals: Engineer will review each submittal and will not return it, or will return it if it does not comply with requirements. Engineer will forward each submittal to appropriate party.

C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Engineer.

D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.

E. Submittals not required by the Contract Documents may be returned by the Engineer without action.

END OF SECTION

SECTION 015000

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 DESCRIPTION

A. General: During the construction period various types of services are necessary to record or support the construction process, which are not an integral part of the final construction. Provide temporary facilities and controls in accordance with the Contract Documents.

B. Scope of Work includes but is not limited to:

a) Layout and measurements.
b) Staging areas.
c) Rubbish removal.
d) Safety, protection and security.
e) Temporary toilets.
f) Water Service
g) Temporary scaffolding, ladders, stairs, hoists, etc.
h) Site fence.
i) Temporary closures
j) Labor disputes
k) Temporary light and power
l) Temporary heat
m) Ventilation and Humidity Control

1.2 RELATED DOCUMENTS

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

B. Ladders, scaffolds, planks, hoists and similar items required for a specific item of work shall be part of that Scope of Work

1.3 QUALITY ASSURANCE

A. Codes: Comply with applicable Building Code and Standards.

B. Standards: Comply with the State and Local Board of Health, Environmental Protection Agency, Fire Department and other applicable standards.

C. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

D. Accessible Temporary Egress: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

1.4 SUBMITTALS

A. Refer to Section 01330 or certain individual items of this section.

1.5 PRODUCT HANDLING

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

1.6 SUMMARY

A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

B. Related Requirements:

1. Section 011000 "Summary" for work restrictions and limitations on utility interruptions.

PART 2 - PRODUCTS AND EXECUTION

2.1 TEMPORARY FACILITIES INSTALLATION

A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to Martinez Couch and Associates, testing agencies, and authorities having jurisdiction.

B. Layout and Measurements:
1. Use of Data Furnished: Boring, and survey data made available to the Contractor is for information only, and the Contractor shall use his own judgment as to the actual conditions. He is warned that reliance on the information presented is at his own risk, and neither the Owner, State, nor the Engineer and his consultants will be liable for errors relating to such data.
2. Additional Data Required By Contractor: The Contractor may make borings or drive test pits he requires to verify the conditions at the site at his own expense. The location and size of such exploratory holes will be subject to approval by the Engineer.

3. Protection of Survey: Land monuments, bench marks, survey points and other such references shall be protected from damage unless and until their removal is authorized. If they are disturbed, they shall be replaced in their proper positions.
4. Measurements: Take measurements of the work and be responsible for it.
   a. Discrepancies: Thoroughly examine the drawings and specifications, carefully checking the figured dimensions, before commencing work, and report to the Engineer if any discrepancy, error, or defect appears.
   b. Dimensions: If figured dimensions are lacking on the drawings, the Engineer will supply them.

C. Staging Area:
1. Scope: Access and staging areas for purposes of this Contract shall be confined to areas as directed by the Owner or Engineer within the property boundary.
2. Location of Apparatus: The locations of material, apparatus, equipment, fixtures, piping outlets, etc., are not specified. The actual location shall be as directed or as required to suit the conditions at the time of installation. Before installation, the Contractor shall consult the Engineer and ascertain the actual location.
3. Provide temporary storage sheds if necessary, and other storage facilities on the job site for the storage of materials that may be subject to weather damage when interior or covered space is not available.
4. Provide for adequate timber bridging and planking or other suitable means as required for legal egress, and for the safeguarding of existing paving, walks and curbs, structures and utilities from damage due to construction vehicle traffic. Safeguard existing conditions from damage during construction. Repair or replace the damaged existing surroundings within the designated access and staging areas which is needed to remain in place and which is damaged by operations under this Contract.
5. Do not encumber the premises nor overload the structures beyond their allowable design live load with his/her apparatus, storage of materials and the operation of his/her workmen, and shall be confined within the limits designated by the Owner or Engineer.

D. Rubbish Removal:
1. Clean-up debris, rubbish and old materials resulting from the Work on a daily basis.
2. Cleaning Responsibility: Remove from the work area of building and site debris, resulting from the work daily or as often as necessary if it interferes with the work or staging area under the contract or presents a fire hazard. No rubbish or debris shall be dropped from a height of more than 6 feet, or thrown out of windows or openings without a chute. An adequate number of cleaning personnel shall be provided during working hours, who shall keep areas within and adjacent to the building free from dust and loose dirt by sweeping and wet mopping.
3. Rubbish Disposal: Furnish containers at central collection locations as designated by the Owner or Engineer on the site to receive construction debris. Cost of containers, removal and disposal charges shall be paid by the Contractor. Containers shall be removed as often as necessary to minimize interference with work in progress.
4. Clean the site around the building and maintain it clean and free from food and beverage containers, waste and other debris. Provide and rigidly enforce the use of waste receptacles by construction personnel. Burning of refuse is not permitted.

5. Salvage Materials: Construction salvage materials, not indicated items elsewhere to be returned to the Owner, shall become the property of the Contractor and shall be taken from the premises. Storage of materials and equipment on the site, other than for this project, will not be permitted.

E. Safety, Protection and Security:

1. Provide safety and protection in accordance with Contract Documents.

2. Protection: Protection shall be maintained for the duration of the Project and shall include:
   a. Weather Protection: Arrange to provide protection against rain, wind, storms, frost, heat and other weather conditions, so as to maintain work, materials, apparatus and fixtures free from injury or damage. At the end of each day's work items likely to be damaged shall be covered. Remove snow and ice for the proper protection and/or execution of the construction work.
   b. Protection of Finished or Existing Work: Provide protection for the finished work. Finished or Existing floors that will remain shall be protected from traffic or construction work by covering with materials approved by the finish manufacturer. Finished construction and materials shall be protected from rain, snow and windstorm damage throughout the construction period.
   c. Fire Protection: Maintain fire-fighting equipment for the duration of construction in accordance with the requirements of the Fire Department and the Insurance Underwriters and subject to approval of the Owner's insurance agent. .Provide fire extinguishers as required by the local Fire Department and the Building Code. Coordinate with existing firefighting equipment in existing building.
   d. Volatile Liquids: Bulk storage of volatile liquids shall be outside the building at designated location. Only as much volatile liquid shall be allowed within the building at any given time as is needed for that day's operation.
   e. Vermin and Rodent Control: Prevent the infestation and multiplication of vermin and rodents, and, if necessary, employ an exterminator to rid the premises of them if there is evidence that they exist.
   f. Dust Protection: Prevent the nuisance of dust to the surrounding areas, and provide coverings or water sprinkling materials and equipment as required for such dust prevention for the work.
   g. Structural Alterations: Do not permit endangering work by excavation or otherwise and shall not cut or alter the work without the consent of the Structural Engineer. Written instruction shall be obtained from the Structural Engineer's representatives before cutting beams or other structural members, arches, lintels, etc.

3. Protection of Adjacent Property:
   a. Scope: Take necessary precautions to protect public and private property on or adjacent to the job site, including utilities, street signs, light standards, hydrants, pavements and walks, planting and natural features, against damage or injury including settlement or collapse.

b. Building Damage: Should damage result to structures or property, the Contractor shall correct or repair it without undue delay and to the complete satisfaction of the Owner. No "Waiver of Responsibility" for incomplete, inadequate or defective adjoining work will be accepted unless otherwise stated by the Engineer.

c. Excavation Damage: Maintain the existing and adjoining structures safety. Concrete or rock excavation in the proximity of the adjoining structures shall be done by line drilling. Existing footings and foundation work exposed shall be underpinned as directed by Engineer. Prevent damage to pipes, conduits, wires, cables or structures above or below ground.

d. Site Damage: Repair and restoration of existing roads, pavements, walks, curbs, manholes, hydrants, light standards, street signs, catch basins, railings and plantings, and other construction or surfaces required due to the work under this contract shall be included in the work under the Contract even if not specifically called for in the various sections of the Specifications. Repair and restoration work shall match existing work. Costs incurred in repair work, including permits, bonds and supervision by public authorities, shall be borne by the Contractor causing the damage.

4. Welding & Cutting:

a. Handling of Welding Materials: The handling and storage of welding materials, acetylene and oxygen tanks, burners, and other equipment required for the execution of welding and cutting work at the job shall be subject to the approval of the Building Department and Fire Marshal.

b. Welding Standards: Work shall be performed in accordance with the standard specifications of the American Welding Society.

c. Fire Protection: Welders shall take precautions required to prevent fires as a result of his/her operations. When welding tools or torches are in used, the Contractor shall have available, in the immediate vicinity of the work, a fire extinguisher of the $C0_2$ type. The fire extinguisher shall be provided and maintained by the Installer. Fuel for cutting and heating torches shall be gas only, and shall be contained in Underwriters Laboratory listed containers. Storage of gas shall be in locations approved by the Fire Department.

Provide fireproofed tarpaulins where applicable at welding and cutting operations.

d. Power: The Owner will not provide power for electric welders.

5. Tree Protection: Trees identified by the Owner or Engineer to remain must be protected by the Contractor during the construction period. Avoid driving vehicles or storing materials within the tree root area and excavating in the root area unless accepted by the Owner or Engineer.

6. Security: The Contractor shall secure his/her tools, materials and assemblies. Claims shall not be made against the Owner or Engineer for equipment or tool losses or damage to installed assemblies.

F. Temporary Toilets:

1. Chemical Toilets: The Contractor shall provide and maintain temporary enclosed and weatherproof chemical toilets located on the site. Use of the owner's toilets by construction personnel within occupied areas of the building is not permitted.
2. Cleaning of Toilets: Toilets shall be maintained in a clean and sanitary condition and shall conform to the requirements of the local Department of Health and Labor requirements. Toilets shall be pumped and cleaned a minimum of once per week.

G. Water Service:
1. Water shall be available for the various trades as coordinated with the property Owner. Prevent freeze-ups. Have water available for the various trades during the normal working periods and for fire prevention purposes.
2. Cost: the Owner shall pay the cost of water.

H. Temporary Scaffolding, Ladders, Stairs, Hoists, Etc.:
1. Scope: Coordinate the installation and maintenance and safety of temporary stairs, ladders, ramps, scaffolds, runways, sidewalk bridges, fences, derricks, hoists, chutes, and other such operational facilities as may be needed for the proper execution of the work. Apparatus, equipment and construction shall meet the requirements of the Labor Law and other State and local Building Department Requirements.
2. Scaffolding: Coordinate the location, erection, maintenance and removal of scaffolding and other temporary facilities as required for the proper installation of the work.
3. Hoists and/or Crane: (for General Use) Coordinate and maintain the use of conventional construction hoists of sufficient size and capacity to raise materials and equipment and give access to construction levels.

I. Site Fence, if applicable:
1. Location: A site fence shall be installed by the Contractor at the construction site perimeter and adjacent staging areas if required by the contract documents. New construction work, including trailer and staging shall be contained within the site fence.
2. Type: Provide either of the following types:
   a. Woven Wire Mesh: 6'-0" high with gates and required bracing.
   b. Maintain fence and gates during entire construction period in a neat and orderly way free of graffiti or unauthorized signs.

J. Temporary Closures:
1. Take special precautions against damage to materials and work installed in cold or freezing weather, by providing adequate special heat and/or covering to prevent damage by the elements.
2. Temporary Partitions: (adjacent to occupied areas) after relocation of occupancy from spaces requiring access, provide temporary partitions to isolate occupied areas from work areas. Temporary partitions shall be of gypsum board on suitable studs and shall not interfere with the emergency exit requirements of occupied areas.
3. Exterior partitions shall be suitably weather protected insulated and otherwise sealed off to prevent dirt and weather infiltration.
4. Interior partitions shall be suitably sealed to limit noise and dirt infiltration.

K. Labor Disputes:

1. Notifications: Immediately notify the Engineer of actual or impending labor disputes that may affect or is affecting the schedule of the Work. Take appropriate measures to eliminate or minimize the effect of such labor dispute on the schedule, including but not limited to, such measures as: promptly seeking appropriate injunctive relief; filing appropriate charges with the National Labor Relations Board under the applicable provisions of the Labor Management Relations Act of 1947, as amended; filing appropriate damage actions; taking such measures as establishing a reserved gate, where appropriate; seek other sources or supply or service; and other measures that may be appropriately utilized to limit or eliminate the effect of the labor dispute.
2. Damage - Time Extension: To the extent the Contractor fails to promptly initiate measures that are appropriate, no extension of time for completion shall be allowed. In addition, any delay impact on any Contractor's schedule or on the schedule for the Project, which is a direct result of such failure, shall be considered as a Contractor caused delay under applicable provisions of the Contract. The rights and remedies provided in this paragraph are in addition to other rights or remedies provided by law or under this Contract. The Contractor shall include this clause in every Contract, together with a requirement that Sub-Subcontractors include a substantially similar clause in each lower tier subcontract.

L. Temporary Light and Power:

1. Scope: The Contractor shall provide labor, materials, tools, appliances, and equipment and perform operations necessary for the complete execution of a separate system of temporary electric light and power throughout the project suitable for supplying electrical energy for illumination and for power tools and equipment. Such system shall be installed and maintained in place as needed and removed promptly as its necessity ceases to exist. Maintaining shall and include energizing and de-energizing the electrical systems each working day, and turning on and off of lights daily.
2.
3. Lighting Standards: The minimum temporary lighting to be provided, and maintained in each room and changed as needed when interior walls are being erected as directed by OSHA standards. Temporary lighting must be maintained for twenty-four (24) hours a day, and seven (7) days a week at stairs and corridors below ground. In other spaces, temporary lighting and power shall be energized approximately thirty (30) minutes before the starting time and after the quitting time of the latest stopping unless otherwise directed by code.
4. Wiring Standards: Temporary wiring and equipment shall conform to the requirements of the National Electrical Code, regulations of the Building Code.
5. Energy Costs: The Owner shall pay the Electric Utility bills, as they become due, for electric energy used for temporary lighting and power to perform work in the building.
6. Other Costs: The Contractor responsible for the other costs in connection with providing and maintaining the temporary electrical power system.

M. Temporary Heat:
   1. Scope of Enclosed Building Protection: Prior to the winter weather protection as required to accomplish the following:
   2. To protect the finish work.
   3. If the heat not available from existing heating plant, the Contractor is responsible to provide sufficient heat so that the work can be accomplish in accordance with the Contract.
   4. Cost: If the other than existing plant used for heat the Contractor shall pay for temporary heat equipment, safety provisions and fuel charges.
   5. Damage Due to Lack of or Improperly Operated Temporary Heat: Maintain heat to prevent damage due to frost and freezing during the period when temporary heat is needed. Prevent damage due to defective equipment or the use of equipment, including but not limited to damage such a stains, smudges, soot or fire, and repair damage in a manner satisfactory to the Owner and Engineer.

N. Ventilation and Humidity Control (Where necessary for project work): Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.

   1. Provide dehumidification systems when required to reduce substrate moisture levels to level required to allow installation or application of finishes.

2.2 SUPPORT FACILITIES INSTALLATION

A. General: Comply with the following:
   1. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

B. Traffic Controls: Comply with requirements of authorities having jurisdiction.

   1. Protect existing site improvements to remain including curbs, pavement, and utilities.
   2. Maintain access for fire-fighting equipment and access to fire hydrants.

C. Parking: Use designated areas of Owner's existing parking areas for construction personnel.

2.3 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

1. Comply with work restrictions specified in Section 011000 "Summary."

B. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.

C. Barricades and Warning Signs: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs.

D. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.

E. Prohibit smoking in construction areas.

F. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.

2.4 MOISTURE AND MOLD CONTROL

A. Contractor's Moisture-Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction.

B. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:

1. Protect porous materials from water damage.
2. Protect stored and installed material from flowing or standing water.
3. Keep porous and organic materials from coming into prolonged contact with concrete.
4. Remove standing water from decks.
5. Keep deck openings covered or dammed.

C. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:

1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
2. Keep interior spaces reasonably clean and protected from water damage.
3. Periodically collect and remove waste containing cellulose or other organic matter.
4. Discard or replace water-damaged material.
5. Do not install material that is wet.
6. Discard, replace, or clean stored or installed material that begins to grow mold.
7. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.

D. Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:

1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
2. Use temporary dehumidifiers or permanent HVAC system, if available to control humidity.
3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.

    a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective.
    b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of exposure and continuing daily for 48 hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
    c. Remove materials that cannot be completely restored to their manufactured moisture level within 48 hours.

2.5 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Maintenance: Maintain facilities in good operating condition until removal.

1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.

D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of Contractor.

2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.

3. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

END OF SECTION 015000

SECTION 01 77 00

CLOSEOUT PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Substantial Completion Procedures.

B. Final Completion Procedures.

C. Requirements for Operating and Maintenance Manuals.

D. Requirements for Warranties.

E. Requirements for Commissioning , Testing, and Inspection Records.

F. Final Cleaning.

1.2 SUBMITTALS

A. Submit under provisions of Section 01 30 00.

B. Manufacturer's data sheets on each cleaning product to be used, including:
   1. Material descriptions, dimensions, and profiles.
   2. Preparation instructions and recommendations.
   3. Storage and handling requirements and recommendations.
   4. Application methods.

C. Material Safety Data Sheets (MSDS), where appplicaple.

D. Contractor’s List of Incomplete Items.

E. Certified List of Incomplete Items.

F. Labor Warranties.

G. Product Warranties.

H. Product Operating and Maintenance Manuals.

I. Project Records: Commissioning, Testing, and Inspection Records.

J. Owner Acceptance Letter.

1.3 SUBSTANTIAL COMPLETION PROCEDURES

A. Contractor’s List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor’s Punch List), indicating the value of each item on the list and reasons why the work is incomplete.

B. Submittals Prior to substantial Completion: Complete the following prior to requesting inspection for determining date of substantial completion. List items below that are incomplete at time of request.

1. Submit closeout submittals, including project record documents, operation and maintenance manuals, warranties, final certifications, and similar final record information.

C. Procedures prior to Substantial Completion: Complete the following prior to requesting inspection for determining date of substantial completion. List items below that are incomplete at time of request.
   1. Instruct owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
   2. Terminate and remove temporary facilities from project site, along with mockups, construction tools, and similar elements.
   3. Complete final construction cleaning (broom sweep), including touch up painting.
   4. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

1.4 FINAL COMPLETION PROCEDURES

A. Preliminary Procedures: Before requesting final inspection for determining final completion, complete the following:
   1. List of incomplete items: Submit certified copy of MCA substantial completion inspection list of items to be completed of corrected (punch list), endorsed and dated by MCA. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.

B. Inspection: Submit a written request for final inspection to determine acceptance. On receipt of request, MCA will either proceed with inspection or notify contractor of unfulfilled requirements. MCA will prepare a final certificate for payment after inspection or will notify contractor of construction that must be completed or corrected before certificate will be issued.
   1. Request reinspection when the work identified in previous inspections as incomplete is completed or corrected.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by contractor that are outside the limits of construction.
   1. Organize list of spaces in sequential order, starting with exterior areas first.
   2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment's, and building systems.
   3. Submit list of incomplete items, including item values, in MS excel electronic file format.

1.6 SUBMITTAL OF PROJECT WARRANTIES

A. Time of submittal: Submit written warranties on request of MCA for designated portions of work where commencement of warranties other than date of substantial completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.

B. Warranty documents to be provided to Owner in hard copy format. Photo copies or scanned PDF versions of the warranty documents shall be provided to MCA for file submission to

PART 2 PRODUCTS

2.1 CLEANING AGENTS AND MATERIALS, GENERAL

A. Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might

damage finished or unfinished surfaces.

PART 3 EXECUTION

3.1 FINAL CLEANING

A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average residential building. Comply with manufacturer's written instructions.
   1. Clean project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
   2. Remove tools, construction equipment, machinery, and surplus material from project site.
   3. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
   4. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
   5. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damages transparent materials.
   6. Remove labels that are not permanent.
   7. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
   8. Leave project clean and ready for occupancy.

3.2 REPAIR OF THE WORK

A. Complete repair and restoration operations before requesting inspection for determination of final completion.

B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
   1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
   2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence or repair or restoration.
   3. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION

SECTION 02 41 19

SELECTIVE DEMOLTION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Demolition and removal of selected portions of building or structure.

B. Demolition and removal of selected site elements.

1.2 REFERENCES

A. American National Standards Institute (ANSI/ASSE).

B. State of Connecticut Department of Energy and Environmental Protection (CTDEEP).

C. State of Connecticut Department of Environmental Protection (CTDEP).

D. State of Connecticut Department of Public Health (CTDPH).

E. Occupational Safety and Health Administration (OSHA).

1.3 SUBMITTALS

A. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.4 FIELD CONDIITONS

A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

B. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work unless otherwise noted in the contract documents.
   1. If suspected hazardous materials are encountered, do not disturb; immediately notify MCA and Owner. Hazardous materials will be removed per the written directive of the CT DOH and under separate specification.

C. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

PART 2 PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that utilities scheduled to remain have been properly protected before starting selective demolition operations.

B. Verify that utilities scheduled to be removed have been disconnected and capped before starting selective demolition operations.

C. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to MCA.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
   1. Arrange to shut off indicated utilities with utility companies.
   2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
   3. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated to be removed.

3.3 PREPERATION

A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent properties.

B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent properties.

C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

3.4 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
   1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces.
   2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.

3. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
4. Dispose of demolished items and materials promptly.

B. Removed and Reinstalled Items:
1. Clean salvaged items.
2. Store items in area as coordinated with Owner.
3. Protect stored items until reinstallation.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for intended use.

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

3.5 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Disposal: Transport demolished materials off Owner's property and legally dispose of them at a licensed transfer station.

3.6 CLEANING

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

END OF SECTION

SECTION 02 82 13

ABATEMENT OF ASBESTOS CONTAINING MATERIALS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A.“Asbestos Abatement Specification, 54 Rainbow Road, Bridgeport, CT”

PART 2 - PRODUCTS

PART 3 - EXECUTION

All work, labor, and materials shall conform to “Asbestos Abatement Specification, 54 Rainbow Road, Bridgeport, CT” prepared by Santo Manicone CT DPH Asbestos Project Designer License #000333

Facility Support Services, LLC

Environmental & Safety Consulting Engineers

ASBESTOS ABATEMENT SPECIFICATIONS

54 RAINBOW ROAD
BRIDGEPORT, CONNECTICUT 06607

Community Development Block Grant – Disaster Recovery
Owner Occupied Recovery and Rehabilitation Program

Applicant #2240

Prepared For:

Martinez Couch & Associates, LLC
1084 Cromwell Avenue
Suite A-2
Rocky Hill, Connecticut 06067

Prepared By:

Facility Support Services, LLC
2685 State Street
Hamden, Connecticut 06517

Santo Manicone
CTDPH Project Designer #000333

June 19, 2014

FSS Project No: 22214

TABLE OF CONTENTS

TECHNICAL SPECIFICATION

Division I	Section 01010	General Requirements
	Section 01016	Scheduling and Phasing
	Section 01026	Unit Prices
	Section 01700	Contract Closeout
Division II	Section 02075	Selective Demolition
	Section 02080	Asbestos Abatement

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Contractor Qualifications.

B. Contractor Use of Site and Premises.

C. Work Sequence.

D. Owner's Operations.

E. Closeout and Punch List.

F. Cleaning.

G. Emergency Calls

1.2 CONTRACTOR QUALIFICATIONS

A. The Contractor selected must appear on the approved list of Asbestos Abatement Contractors on file at the State of Connecticut Department of Public Health (CTDPH). Only State of Connecticut licensed asbestos abatement supervisors and workers shall perform asbestos abatement work activities.

B. Submit a written statement regarding whether the Contractor has ever been found out-of-compliance with federal or state asbestos regulations pertaining to worker protection, removal, transport, or disposal.

C. The Contractor shall obtain and pay for all required permits, and prepare and file any original and amended local forms immediately following award of the work.

D. The Contractor shall conduct personal exposure air monitoring for airborne fibers as prescribed by OSHA during the project performance.

E. The Project Engineer reserves the right to award this Contract to the Contractor who best meets all contractor qualifications, project requirements and Owner's interests.

1.3 CONTRACTORS USE OF SITE AND PREMISES

A. Limit use of site and premises as follows:
   1. Owner occupancy.
   2. Work by Owner.
   3. Use of site and premises by public.

B. Coordinate use of the premises, including use of utilities under direction of Owner and in accordance with local ordinances.

C. Assume full responsibility for protection and safekeeping of products under this Contract.

1.4 WORK SEQUENCE

A. Work must be performed to accommodate Project Engineer and Owner's requirements and work by other trades. Coordinate abatement schedule and operations with the Owner and Project Engineer. Re-occupancy by Owner and other trades shall occur following completion of work by the Contractor and successful air clearance sampling by the Consultant.

B. The Owner will not occupy the building during the Work.

1.5 CONTRACTOR'S OPERATIONS

A. Maintain means of egress.

B. Coordinate Work with the Owner and Project Engineer.

C. Maintain the fire alarm and fire detection systems at all times during project.

D. Maintain a permanent means of egress during activities. Provide and maintain a temporary means of egress as required by the Fire Marshall.

1.6 CLOSEOUT AND PUNCH LIST

A. The Contractor shall carefully check his/her own work and that of any Subcontractor as the work is being performed. Unsatisfactory work shall be corrected immediately.

B. When the Contractor determines that he is substantially complete, that is, has less than one percent of his Contract remaining to be completed, he shall prepare for submission to the Consultant, a list of items to be completed or corrected. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all work in accordance with the Contract Documents.

C. Upon receipt of the Contractor's list of items to be completed or corrected, the Consultant will promptly make a thorough inspection and prepare a "punch list" setting forth in accurate detail any items on the Contractor's list and any additional items that are not acceptable.

D. When the "punch list" has been prepared, the Consultant will arrange a meeting with the Contractor to identify and explain all punch list items and answer questions on the work that must be completed before final acceptance.

E. The Contractor shall correct all "punch list" items or shall cause the correction of the "punch list" items within a time frame to be established when the "punch list" is made. The time frame for the completion of the "punch list" shall not exceed the completion date of the Contract. Should the "punch list" not be completed within the specified time frame, the Project Engineer may invoke the rights given under the General Conditions.

F. The Consultant shall not be expected to inspect any area more than once for the preparation of the "punch list" items. If, during an inspection, the Consultant discovers five (5) or more deficient conditions, then the area shall be declared "Not Ready" for Inspection.

G. All inspections and sampling required for asbestos abatement compliance will be performed by the Consultant.

1.7 CLEANING

A. Throughout the abatement period, the Contractor shall maintain the building and site free of rubbish, debris, surplus materials, and other items not required for the Work. Remove such materials from the site daily to prevent accumulations. Remove all construction debris from work areas, and remove all hazardous waste and asbestos waste as required by the most current federal, state, and local regulations and the requirements of the specifications.

1.8 EMERGENCY CALLS

A. The Contractor shall provide the Project Engineer and Owner with a telephone number where the Contractor or Contractor's Representative can be reached during non-working hours.

B. At the direction of a duly authorized representative of the Project Engineer, the Contractor may be required to dispatch all necessary personnel and equipment to any point on the work site to clear obstructions or make safe any conditions deemed necessary by the Project Engineer or Consultant.

1.9 ADDITIONAL GENERAL REQUIREMENTS

A. The Abatement Contractor shall employ an English-speaking competent Asbestos Abatement Supervisor with at least three (3) years experience on projects of similar scope and magnitude who shall be responsible for all work involving asbestos abatement as described in the Specifications and defined in the applicable regulations, and have full-time daily supervision of the same. The Supervisor shall be the "Competent Person" as defined by OSHA regulations. The Contractor shall provide, on-site, at least one English-speaking foreman at all times when work is in progress. The supervisor and foreman must be thoroughly experienced in asbestos-containing materials removal work, knowledgeable of all applicable federal, state, and local regulations and capable of skillfully executing all work promptly, efficiently and in compliance with all requirements of these specifications. The Project Engineer reserves the right to have any supervisory or foreman personnel removed from the project if they do not demonstrate the requisite qualifications.

B. The Contractor shall allow work performed under this contract to be inspected, if required, by local, state, federal, and any other authorities having jurisdiction over such work. The Contractor shall immediately notify the Project Engineer and shall maintain written evidence of such inspection for review by the Project Engineer or Consultant.

C. The Contractor shall incur the cost of all fines resulting from regulatory non-compliance as issued by federal, state, and local agencies. The Contractor shall incur the cost of all work requirements mandated by federal, state, and local agencies as a result of regulatory non-compliance or negligence.

D. The Contractor shall immediately notify the Project Engineer of the delivery of all permits, licenses, certificates of inspection, approval or occupancy, etc., and any other such instruments required under codes by authorities having jurisdiction, regardless of to who issued, and shall cause them to be displayed to the Owner and Project Engineer for verification and recording.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

A. The Contractor shall present a working schedule to the Project Engineer and Owner. Variations, amendments, and corrections to the schedule will be discussed, and the Owner will inform the Contractor of additions or changes in the scheduling requirements for the project.

B. The Contractor shall submit any revised schedule no later than three days following initial schedule submission. Upon approval from the Project Engineer, the Contractor will receive a "Notice to Proceed" with the work of the Contract.

C. Any subsequent changes in the work schedule must be approved by the Project Engineer.

D. Refer to all other applicable sections of the specification for coordination with other trades. The Contractor shall coordinate work with all other activities at this occupied site.

1.2 TIME FOR COMPLETION AND WORKING HOURS

A. Upon award of contract from the Project Engineer, the Contractor shall immediately order materials, supplies, and components for the work of this project.

B. The Contractor shall begin the work immediately upon receipt of the written "Notice to Proceed" from the Project Engineer. The date of the commencement of the work is termed the "Abatement Start Date." The Contractor will be required to complete all work of this Contract within the time period stipulated in the finalized schedule. The last day in the schedule is termed as "Contract Completion Date".

C. If conditions arise that are beyond the control of the Contractor and force delays in the performance of the Work, the Project Engineer shall immediately be notified. The Contractor shall state the reason for the delay and shall estimate the expected duration of the delay. Any application for an extension of the Contract completion date shall be made under proper change order procedures. The acceptance of the cause for delay and change order is subject to the Project Engineer's review and approval.

D. Work hours will be established in coordination with the Project Engineer and Owner.

E. Any extra hours or days per week worked by the Contractor or Sub-Contractors shall be at no extra cost to any other party. Denial of extra hours or days per week by the

Project Engineer or Owner shall not be grounds for extra time allotted to the overall Contract time.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

PART 1 – GENERAL

1.1 SUMMARY

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

B. Unit prices include material, any direct or indirect expenses of the Contractor or Sub-Contractor, profit, insurance, bonding, and any applicable taxes. The same unit price shall apply whether the work is added or deducted.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

NOT USED

END OF SECTION

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

A. General Provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 FINAL CLEANING

A. Unless otherwise specified under Sections of this Specification, the Contractor shall perform final cleaning operations specified prior to final inspection.

B. Maintain the project site free from accumulations of waste, debris and rubbish caused by operations. At the completion of the work, remove waste materials, rubbish, tools, equipment, machinery and surplus materials, and clean all sight-exposed surfaces; leave the project clean and ready for work of others under separate contract.

C. Cleaning shall include all surfaces, interior and exterior, in which the Contractor has had access.

D. Use only those materials that will not create hazards to health or property.

1.3 ABATEMENT CLOSEOUT DOCUMENTS

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

B. Submit to the Project Engineer, copies of all notifications & permits and all worker certifications (certificates, training, medical, and fit-test).

C. The Contractor must be able to provide Certified Payroll documentation to Martinez Couch & Associates, LLC, or its Representative or Project Auditors upon formal request.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

DIVISION II

SPECIAL CONDITIONS

FOREWORD

Supplementing Division I of the Specifications for the work to be performed under this Contract, DIVISION II, SPECIAL CONDITIONS, shall apply particularly to this Contract.

The enforcement of the requirements of any of the Special Conditions shall not be construed as waiving any of the rights of the Owner, Project Engineer, or Consultant, contained in any of the other provisions of the Contract.

The Contract documents, including without limitation, these Special Conditions, shall be interpreted and construed as far as is reasonably possible to be in addition to, supplementary to and consistent with each other.

PART 1 - GENERAL

1.1 SUMMARY

A. Provide selective demolition as necessary to remove existing floor tiles and mastics and Sheetrock and associated Joint Compound. Contractors are responsible to review selective abatement areas and not to disturb areas outside of the project work scope. Contractor will be responsible for any damages and repair of these out of scope areas.

1.2 PROJECT CONDITIONS

A. Occupancy:

1. Areas of the building in which selective demolition will occur will be unoccupied during work.

B. Existing Conditions:

1. After the project has begun, the Contractor is responsible for the condition of the structures to be selectively demolished.

2. Unforeseen Conditions: Should unforeseen conditions be encountered that affect design or function of project, investigate and fully submit an accurate, detailed, written report to the Project Engineer. While awaiting a response, reschedule operations if necessary to avoid delay of the overall project.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and sealed. (Where applicable).

B. As practicable, arrange operations to reveal unknown or concealed conditions for examination and verification before removal or demolition.

C. Verify actual conditions to determine, in advance, whether removal or demolition of any element will result in structural deficiency, overloading, failure, or unplanned collapse.

3.2 PREPARATION

A. Traffic:

1. Do not obstruct walks or public ways without the written permission of governing authorities and of the Owner. Where routes are permitted to be closed, provide alternate routes, if required.

B. Protection:

1. Provide for the protection of persons passing around or through the area of demolition.
2. Perform demolition so as to prevent damage to adjacent improvements and facilities to remain.
3. Protect walls, floors, and other new or existing work from damage during demolition operations.

3.3 POLLUTION CONTROLS

A. Control as much as practicable the spread of dust and dirt.

B. Observe environmental regulations.

C. Do not allow water usage that may result in freezing or flooding.

D. Do not allow adjacent improvements to remain to become soiled by demolition operations.

3.4 DEMOLITION - GENERAL

Not Applicable.

3.5 DISPOSAL OF NON-CONTAMINATED MATERIALS

A. Promptly dispose of materials resulting from demolition operations. Non-contaminated material shall be disposed of as general waste or recycled as applicable. Do not allow materials to accumulate on site.

B. All rubbish and waste material from the Work shall be neatly stacked or kept in suitable containers and removed from the premises daily. The premises shall be kept clean and in an orderly condition at all times to the satisfaction of the Owner.

C. Transport materials resulting from demolition operations and legally dispose of off-site.

D. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.

3.6 CLEANING

A. Throughout the construction period, the Contractor shall maintain the building and site free of rubbish, debris, surplus materials, and other items not required for the Work. Remove such material from the site daily to prevent accumulations. Remove all construction debris from work areas, and remove all hazardous waste and asbestos waste, as required, by the most current federal, state, and local regulations and the requirements of the specifications.

END OF SECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. General Provisions of Contract, including Supplementary Conditions and other Division 1 Sections, apply to this Section.

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

1.2 SCOPE OF WORK

A. Work outlined in this section includes all that is necessary for the complete removal and disposal of asbestos-containing materials (ACMs) identified in the areas as detailed below for 54 Rainbow Road in Bridgeport, CT. The Contractor is responsible for verification of all quantities of ACM scheduled for removal. This verification shall include an on-site walk-through inspection of the work area. The project is detailed in the following table.

TABLE 1: LIST OF ACMs

MATERIAL	LOCATION	ESTIMATED QUANTITY
Sheetrock/Taping Compound	2nd Floor walls and ceilings	3 (areas) X 4 sq. ft. Total 12 sq. ft.
Red Floor Tile and associated Mastic	Basement	20 sq. ft.

1.3 DEFINITIONS

The following definitions relative to asbestos abatement apply:

1. ABATEMENT - Procedures to control fiber releases from asbestos-containing materials; includes removal, encapsulation, and enclosure.

2. AIR MONITORING - The process of measuring the airborne fiber concentration within an area or within a person's breathing zone.

3. AMENDED WATER - Water to which a surfactant has been added.

4. ASBESTOS - The name given to a number of naturally occurring fibrous silicates. This includes the serpentine forms and the amphiboles and includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite, or any of these forms, which have been chemically altered.

5. ASBESTOS PROJECT MONITOR (APM) - A professional capable of conducting air monitoring and analysis of samples for airborne fiber concentrations. This individual should be an industrial hygienist, an environmental scientist, or an engineer with experience in asbestos air monitoring and worker protection equipment and procedures. This individual should have demonstrated proficiency in conducting air sample collection in accordance with 29 CFR 1910.1001 and 29 CFR 1926.1101.

6. ASBESTOS WORK AREA - A regulated area as defined by OSHA 29 CFR 1926.1101 where asbestos abatement operations are performed which is isolated by physical barriers to prevent the spread of asbestos dust, fibers, or debris. The regulated area shall comply with requirements of regulated area for demarcation, access, respirators, prohibited activities, competent persons and exposure assessments and monitoring.

7. ASBESTOS FIBERS – Those asbestos particles with a length greater than five (5) microns and a length to diameter ratio of 3:1 or greater.

8. CLEAN ROOM - An uncontaminated area or room, which is a part of the worker decontamination enclosure with provisions for storage of workers' street clothes and protective equipment.

9. CLEARANCE SAMPLING - Final air sampling performed aggressively after the completion of the abatement project in a regulated area. Clearance sampling can be conducted by either of the following two methods:

(A) Air samples collected by the air sampling professional having a fiber concentration of less than 0.01 fibers/cc of air in each of five (5) samples collected inside the containment will denote acceptable clearance sampling by Phase Contrast Microscopy (PCM).

(B) Five air samples collected inside the containment by the air sampling professional having an average asbestos concentration of less than 70 structures per square millimeter of air will denote acceptable clearance sampling for Transmission Electron Microscopy (TEM).

10. COMPETENT PERSON - As defined by 29 CFR 1926.1101, a representative of the Abatement Contractor who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure. In addition has authority to take prompt corrective measures to eliminate such hazards during asbestos removal. Competent person shall be properly trained in accordance with Environmental Protection Agency's (EPA) Model Accreditation Plan.

11. CURTAINED DOORWAY - A device to allow ingress and egress from one area to another while permitting minimal air movement between the areas. Two curtained doorways spaced a minimum of six feet apart can form an airlock.

12. DECONTAMINATION ENCLOSURE SYSTEM - A series of connected areas, with curtained doorways between any two adjacent areas, for the decontamination of workers and equipment. A decontamination enclosure system always contains at least one airlock and is adjacent and connected to the regulated area, where possible.

13. ENCAPSULANT - A liquid material which can be applied to asbestos-containing materials which controls the possible release of asbestos fibers from the materials either by creating a membrane over the surface (bridging encapsulant) or penetrating the material and binding its components together (penetrating encapsulant).

14. EQUIPMENT ROOM – Any contaminated area or a room that is part of the worker decontamination enclosure with provisions for storage of contaminated clothing and equipment.

15. FIXED OBJECT - Unit of equipment or furniture in the work areas that cannot be removed from the work area.

16. FRIABLE ASBESTOS MATERIALS - Any material that contains more than 1% asbestos by weight, that can be crumbled, pulverized or reduced to powder by hand pressure.

17. GLOVE BAG - A manufactured polyethylene bag type of enclosure with built-in gloves such as is placed with an airtight seal around asbestos-containing material and which permits the asbestos-containing materials contained by the bag to be removed

without releasing asbestos fibers to the atmosphere. The use of glove bag is permitted for removal and repair of small amount (less than 3 linear feet/3 square feet) of ACM.

18. HEPA FILTER - High Efficiency Particulate Air (HEPA) filter in compliance with ANSI Z9.2-1979.

19. HEPA VACUUM EQUIPMENT - Vacuum equipment equipped with a HEPA filter system for filtering the effluent air from the unit.

20. MOVABLE OBJECT - Unit of equipment or furniture in the work area that can be removed from the work area.

21. NEGATIVE AIR PRESSURE EQUIPMENT - A portable local exhaust ventilation system equipped with HEPA filtration used to create negative pressure in a regulated area (negative with respect to adjacent unregulated areas) and capable of maintaining a constant, low velocity air flow into regulated areas from adjacent unregulated areas.

22. NESHAPS - National Emissions Standard for Hazardous Air Pollutants regulations enforced by the EPA.

23. PERMISSIBLE EXPOSURE LEVEL (PEL) - The average airborne concentration of asbestos fibers to which an employee is allowed to be exposed over an eight-hour period. The PEL established by OSHA 29 CFR 1926.1101 is 0.1 fibers per cubic centimeter of air averaged over an eight-hour time period. An airborne fiber concentration of 1.0 fibers /cc averaged over a sampling period of 30 minutes is the Excursion Limit. The Contractor is responsible for maintaining work areas in a manner that this standard is not exceeded.

24. REGULATED AREA - An area established by the employer to demarcate where Class I, II, and III asbestos work is conducted and any adjoining area where debris and waste from such asbestos work accumulate, and a work area within which airborne concentrations of asbestos fibers may exceed the PEL.

25. SHOWER ROOM - A room between the clean room and the equipment room in the work decontamination enclosure with hot and cold running water and suitably arranged for employee showering during decontamination. The shower room is located in an airlock between the contaminated area and the clean area.

1.4 SUBMITTALS

A. The Contractor shall submit the following to the Owner prior to the start of the project:

1. Evidence that the Contractor is certified to perform asbestos abatement work in the State of Connecticut.

2. Schedule to the Owner, which defines a timetable for executing and completing the project, including set-up, removal, cleanup, decontamination, and air clearance monitoring.

3. The identity and licensing of the hauling contractor and the landfill to be used.

4. Connecticut certificates of licensure (current) and training (both initial and current refresher), current respirator fit test records, and current medical records for each employee who may be on the project site. No individual shall provide services as an asbestos abatement site supervisor or as an asbestos abatement worker without a license to do so issued by the CTDPH.

5. Signed copy of the Certificate of Workers Acknowledgment found at the end of this section for each worker who is to be at job site.

6. Detailed product information on all materials and equipment proposed for asbestos abatement work on this project.

B. The following shall be available onsite during the work:

1. Training, State certification, respirator fit test, and medical records for employees to start work.

C. The following shall be submitted to the Owner at the completion of work:

1. Completed Punch List.

2. Completed copies of Waste Shipment Records (WSR).

1.5 REGULATIONS AND STANDARDS

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

1. U.S. Environmental Protection Agency (USEPA) National Emissions Standards for Hazardous Air Pollutants (NESHAP) Regulations (40 CFR 61, Subpart M);

2. Occupational Safety and Health Administration (OSHA) Asbestos Regulations (29 CFR 1910.1001 and 1926.1101);

3. State of Connecticut Department of Public Health (CTDPH) Standards for Asbestos Abatement Sections 19a-332a-1 through 19a-332a-16 inclusive and Sections 20-440-1 through 20-440-9 inclusive;

4. State of Connecticut Department of Energy & Environmental Protection (CTDEEP) Regulations, Section 22a-209-8(i) and Section 22a-220 of the Connecticut General Statute.

5. Connecticut Basic Building Code (BOCA)

6. National Fire Protection Association (NFPA) Life Safety Code;

7. Local health and safety codes, ordinances or regulations pertaining to asbestos abatement and all national codes and standards including Association for Standards of Testing and Materials (ASTM), American National Standards Institute (ANSI), and Underwriters Laboratories (UL).

8. Occupational Safety and Health Administration (OSHA) (29 CFR 1910 Subpart D) and (29 CFR 1926 Subpart M) Fall Protection.

1.6 EXEMPTIONS

A. Any deviations from these Specifications require the written approval and authorization from the Consultant's Asbestos Project Designer.

B. Any deviation in work practices identified in CTDPH Standards for Asbestos Abatement, Sections 19a-332a-1 to 19a-332a-23, Sections 20-440-1 to 20-440-9, Section 20-441, and Section 19a-332e-1 to 19a-332e-2, <u>must</u> be requested in writing and approved in writing by the CTDPH.

1.7 FINAL VISUAL INSPECTION AND CLEARANCE AIR SAMPLING

A. Following the completion of the final cleaning phase of the work in a contained work area, the Consultant shall conduct a final visual inspection of the area. The Contractor shall be responsible for meeting final visual criteria, which is the absence of visible debris, as specified in CTDPH regulation 19a-332a-12(b).

B. Following the completion of the final visual inspection, and upon which time the Consultant agrees that the Contractor has met the final visual criteria and the work area has been encapsulated, the Consultant will collect final clearance air samples in work area(s) as required. The Owner shall be responsible for payment of the sampling and analysis of the first round of final air clearance samples only for a particular work area. The Contractor shall be responsible for payment of all costs associated with the collection and analysis of additional final air clearance samples if the first round samples fail to meet the designated clearance criteria of 0.010 fibers/cubic centimeter (f/cc) by phase contrast microscopy (PCM) or <70 structures per square millimeter (s/mm) by transmission electron microscopy (TEM).

1.8 NOTIFICATIONS, POSTINGS, SUBMITTALS, AND PERMITS

A. The Contractor shall make the following notifications and provide submittals to the following agencies prior to the commencement of removal work. This notification is required ten (10) calendar days prior to the start of the abatement project:

1. State of Connecticut
   Department of Public Health
   Indoor Air Program
   410 Capitol Avenue
   P.O. Box 340308
   Hartford, CT 06134-0308

   Note: Required for abatement occurring in a School facility. Also satisfies the requirement to notify the EPA.

2. State of Connecticut
   Department of Energy & Environmental Protection
   Health Services and Solid Waste management Unit
   79 Elm Street
   Hartford, CT 06106
   (Only if asbestos waste is disposed of in Connecticut)

B. The minimum information included in the notification to these agencies includes:

1. Name and address of site owner/operator.

2. Site location.

3. Amount of friable and non-friable asbestos-containing materials to be removed.

4. Work schedule, including proposed start and completion dates.

5. Asbestos removal procedures to be used.

6. Name and location of disposal site for generated asbestos waste, residue, and debris.

1.9 WORK SITE SAFETY PLAN

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

1. Evacuation of injured workers.

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

3. Emergency first aid treatment.

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

5. Methods to notify appropriate personnel in the event of a fire or other emergency requiring evacuation of the site or area.

6. Site safety plan for fall protection.

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

1.10 CONTROL OVER REMOVAL WORK

A. At the discretion of the owner, all work procedures may be continuously monitored by the Consultant's Asbestos Project Monitor (APM) to determine that areas outside the designated work area(s) have not been contaminated.

B. Prior to work on any given day, the Contractor's designated "Competent Person" shall discuss the day's work schedule with the APM to evaluate job tasks with respect to safety procedures and requirements specified to prevent contamination outside the work area. This includes a visual survey of the work area(s) and the decontamination enclosure systems. (if applicable)

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

1. Non-essential personnel are prohibited from entering the area.

2. All authorized personnel entering the work area shall read the "Worker Protection Procedures" which are posted at the entry points to the enclosure system, and shall be equipped with properly fitted respirators and protective clothing.

3. All personnel who are exiting from the decontamination enclosure system shall be properly decontaminated.

4. Asbestos waste that is taken out of the work area must be properly bagged and labeled in accordance with these specifications. The surface of the bags shall be decontaminated. Asbestos waste leaving the enclosure system must be immediately transported off site or immediately placed in locked, posted temporary storage on site, and removed within 24 hours of the project conclusion. The Contractor will seek permission of the Owner to place a temporary dumpster at a suitable location (if applicable).

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

1.11 PROPER WORKER PROTECTION

A. This section describes the equipment and procedures required for protecting workers against asbestos contamination and other workplace hazards except for respiratory protection.

B. All workers are to be accredited and certified as Asbestos Abatement Workers as required by the CTDPH.

C. The Contractor is required to be certified, accredited, and licensed as required by the CTDPH.

D. In accordance with 29 CFR 1926.1101, all workers shall receive a training course covering the dangers inherent in handling asbestos, the dangers of breathing asbestos dust, proper work procedures, and proper worker protective measures. This course must include but is not limited to the following:

1. Methods of recognizing asbestos.
2. Health effects associated with asbestos.
3. Relationship between smoking and asbestos in producing lung cancer.
4. Nature of operations that could result in exposure to asbestos.
5. Importance of and instruction in the use of necessary protective controls, practices and procedures to minimize exposure including:
   a. Engineering controls
   b. Work practices
   c. Respirators
   d. Housekeeping procedures
   e. Hygiene facilities
   f. Protective clothing
   g. Decontamination procedures
   h. Emergency procedures
   i. Waste disposal procedures
6. Purpose, proper use, fitting, instructions, and limitations of respirators as required by 29 CFR 1910.134.
7. Appropriate work practices for the work.
8. Requirements of medical surveillance program.
9. Review of 29 CFR 1926.
10. Pressure differential systems.
11. Work practices including hands on or on-job training.
12. Personal Decontamination procedures.
13. Air monitoring, personal and area.

E. The Contractor shall provide medical examinations for all workers who may encounter an airborne fiber level of 0.1 f/cc or greater for an eight-hour Time Weighted Average (TWA). In the absence of specific airborne fiber data, provide medical examinations for all workers who will enter the work area for any reason. Examination shall at a minimum meet OSHA requirements as set forth in 29 CFR 1926.1101. In addition, provide an evaluation of the individual's ability to work in environments capable of producing heat stress in the worker.

F. Submit the following to the Project Engineer for review. The Contractor shall not start work until the Project Engineer or Consultant reviews the submittals and indicates that they are acceptable.

1. Certificates from an EPA-approved AHERA Abatement Workers course for each worker as evidence that each Asbestos Abatement Worker is accredited

as required by the AHERA Regulation 40 CFR 763 Appendix C to Subpart E, April 30, 1987.

2. Evidence that the Contractor is certified to perform asbestos abatement work by the State of Connecticut Department of Public Health.

3. An original signed copy of the Certificate of Worker's Acknowledgment found at the end of this section, for each worker who is to be at the job site or enter the Work Area.

4. Documents verifying that each worker has had a medical examination within the last 12 months as part of compliance with OSHA medical surveillance requirements. Submit, at a minimum, for each worker the following:
   a. Name and Social Security Number.
   b. Physicians Written Opinion from examining physician including at a minimum the following:
      1) Whether worker has any detected medical conditions that would place the worker at an increased risk of material health impairment from exposure to asbestos.
      2) Any recommended limitations on the worker or on the use of personal protective equipment such as respirators.
      3) Statement that the worker has been informed by the physician of the results of the medical examination and of any medical conditions that may result from asbestos exposure.

5. Information that was provided to physician in compliance with 29 CFR 1926.1101.

6. A statement that the worker is able to wear and use the type of respiratory protection proposed for the project, and is able to work safely in an environment capable of producing heat/cold stress in the worker.

G. Certification signed by an officer of the company and notarized which states that exposure measurements, medical surveillance, and worker training records are being kept in conformance with the requirements of OSHA 29 CFR 1926.

1.12 CONTRACTOR'S AIR SAMPLING RESPONSIBILITY

A. The Contractor is responsible for monitoring airborne asbestos fiber concentrations in the workers' breathing zones and to establish conditions and work procedures for maintaining compliance with OSHA Regulations 29 CFR 1910.1001, and 1926.1101.

B. The air sampling procedures shall ensure proper documentation of all personal air-sampling results. Documentation for personal sampling must be available at the job site for review by federal and/or state regulatory agencies.

C. All air sampling shall be conducted in accordance with methods described in OSHA Standards 29 CFR 1910.1001 and 1926.1101. The flow rate for air samples will not be less than 0.5 liters/minute and must not exceed 2.5 liters/minute.

1.13 RESTRICTIONS ON CONTRACTOR'S USE OF GROUNDS

A. The Contractor shall confine his/her operations to the actual work site, access routes and storage areas designated by the Owner. The Contractor may place a dumpster at a place designated by the Owner.

B. The Contractor shall have sole responsibility for providing all materials, equipment, or tools and any storage required shall be at the Contractor's own risk. The Owner will not assume responsibility for any loss of materials, equipment, or tools stored on its property.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Deliver all materials in the original packages, containers, or bundles bearing the name of the manufacturer and the brand name and product technical description.

B. Damaged or deteriorating materials shall not be used and shall be removed from the premises. Material that becomes contaminated with asbestos shall be decontaminated or disposed of as asbestos waste.

C. Polyethylene sheet in a roll size to minimize the frequency of joints shall be delivered to the job site with factory label indicating 4 or 6 mil thickness.

D. Polyethylene disposable bags shall be six (6) mil thick with pre-printed labels.

E. Tape and adhesive spray will be capable of sealing joints in adjacent polyethylene sheets and for attachment of polyethylene sheet to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions, including use of amended water.

F. Surfactant (wetting agent), shall consist of fifty (50) percent polyoxyethylene ether and fifty (50) percent polyoxyethylene ester, or equivalent, and shall be mixed with water to provide a concentration of one (1) ounce surfactant to five (5) gallons of water or as directed by manufacturer.

G. Removal encapsulant shall be non-flammable factory prepared penetrating chemical encapsulant found acceptable to Consultant. Usage shall be in accordance with manufacturer's printed technical data.

H. The Contractor shall have available spray equipment capable of mixing wetting agent with water and capable of generating sufficient pressure and volume and having sufficient hose length to reach all areas where asbestos is present.

I. Impermeable containers are to be used to receive and retain any asbestos- containing or contaminated materials until disposal at an acceptable disposal site. (The containers shall be labeled in accordance with OSHA Standard 29 CFR 1926.1101) Containers must be both air and watertight.

J. Labels and signs, as required by OSHA Standard 29 CFR 1926.1101 will be used.

K. Encapsulant shall be bridging or penetrating type which has been found acceptable to the Consultant. Usage shall be in accordance with manufacturer's printed technical data.

L. A high efficiency particulate air (HEPA)-filtered local exhaust ventilation shall be utilized during the installation of enclosures and supports where asbestos-containing materials may be disturbed.

2.2 TOOLS AND EQUIPMENT

A. The Contractor shall provide all tools and equipment necessary for asbestos removal.

B. The Contractor's air monitoring professional shall have air-monitoring equipment of type and quantity to monitor operations and conduct personal exposure monitoring per OSHA requirements.

C. The Contractor shall have available sufficient inventory of dated purchase orders for materials necessary for the job including protective clothing, respirators, filter cartridges, polyethylene sheeting of proper size and thickness, tape and air filters.

D. The Contractor shall have available power cables or power sources such as generators (where required).

E. Exhaust air filtration system units shall contain HEPA filter(s) capable of sufficient air exhaust to create negative pressure of at least 0.02 inches of water column within each enclosure with respect to outside areas. Equipment shall be checked for proper operation by smoke tubes or differential pressure gauge before the start of each shift and at least twice during the shift. Adequate exhaust air shall be provided for a minimum of four (4) air changes per hour within the enclosure. No air movement

system or air filtering equipment shall discharge unfiltered air outside, nor shall filtered air units be exhausted indoors from the work area.

F. Vacuum units, of suitable size and capacities for the project, shall have HEPA filter(s) capable of trapping and retaining at lead 99.97 percent of all monodispersed particles of 0.3 micrometers in diameter or larger.

G. The Contractor will have reserve units so that the exhaust air filtration system will operate continuously.

2.3 ELECTRICAL

A. If the Contractor elects to furnish and install a portable ground fault circuit interrupter (GFCI) Power Supply Board and receptacles, it shall include the following:

1. All circuits individually GFCI-protected.

2. Weatherproof enclosure NEMA 3 (rain-tight) with receptacle covers.

3. Construction durable, 16-gauge steel construction.

4. At least two 20-amp circuits (for APM).

5. Main circuit breaker.

5. Components UL listed.

6. At least two 20-amp circuits (for Decontamination Facility).

B. The Contractor shall furnish and install wiring as follows:

1. Size the wire to limit voltage drop to a maximum of 3% with length of run.

C. The Contractor will supply additional lighting for all abatement work areas if necessary to provide sufficient lighting.

D. As necessary, the Contractor will de-energize, lockout, and tag existing electrical components within the work area at their closest main source.

E. The Contractor shall provide all electrical connections and equipment necessary to supply “bead/shot” machine.

F. The Owner will furnish electrical power for the project.

PART 3 - EXECUTION

3.1 WORKER PROTECTION

A. General:

1. All asbestos abatement work shall be performed in accordance with 29 CFR 1910.1001, 29 CFR 1926.1101 and State of Connecticut regulations as specified herein. Personnel shall wear and utilize protective clothing and equipment as specified herein. Eating, smoking, drinking, chewing gum, or applying cosmetics shall not be permitted in the asbestos control area. Personnel of other trades not engaged in the abatement of asbestos shall not be allowed in the work area unless all the personnel protection provisions of this Specification are complied with by the trade personnel.

2. Engineering controls shall be used to minimize airborne fiber concentrations within the work area. A combination of personal protective equipment and work practices shall also be used to further reduce employee exposure to asbestos fibers.

3. The Contractor shall provide all authorized visitors with respirators, new filters, protective clothing, headgear, eye protection, footwear, and hard hats as in the procedures described herein and afford them the use of all facilities to keep them free of contamination from asbestos fibers.

4. The Contractor shall provide the decontamination facility for worker and equipment decontamination as well as the results of the personal air monitoring.

B. Respiratory Protection:

1. The Contractor shall select and provide at no cost to his/her employees respirators, which shall provide adequate protection to the employee as specified by Section 1910.1001(g) Table D-1 and Section 1926.1101(h) Table D-4.

2. Respiratory protection shall be worn by all persons potentially exposed to elevated airborne concentrations of asbestos fibers from the initiation of the asbestos abatement project until all areas have been given clearance. Clearance shall be conducted by the APM.

3. The Contractor shall provide Powered Air Purifying Respirators (PAPR) or Type C (continuous flow or pressure demand) supplied air respirators to all workers at the job site. If it is established, through collection and analysis of personal air samples in accordance with the OSHA Reference Method

(ORM) (See U.S. Department of Labor; Occupational Safety and Health Administration; Occupational Exposure to Asbestos; Title 29 CFR 1910.1001, "General Industry Standard." Title 29 CFR 1926.1101, "Construction Standard") that this respiratory protection is more than sufficient the Contractor may provide half face-piece air purifying respirators.

a. Once the exposure limits have been established, the respirators presented in 29 CFR 1910.1001 that afford adequate protection at such upper concentrations of airborne asbestos fibers shall be used.

b. The minimum personal sampling period shall be seven hours at a flow rate of 0.5 to 2.5 liters per minute. The samples shall be collected within the workers' breathing zone. Personal sampling shall be the responsibility of the Contractor. Personal sampling results shall be available on site no later than 24 hours after sampling.

c. The filters provided for both the cartridge respirators and the PAPR's shall be National Institute for Occupational Safety and Health (NIOSH) approved for asbestos fibers.

C. Protective Clothing:

1. The Contractor shall provide to all workers, foreman and superintendents, protective disposable clothing consisting of full body coveralls, head covers, and 18-inch high boot type covers or reusable footwear.

2. The Contractor shall provide eye protection and hard hats, as required, by job conditions and safety regulations.

3. Reusable footwear, hard hats and eye protection devices shall be left in the "contaminated equipment room" until the end of the asbestos abatement work.

4. Upon completion of asbestos abatement work, the footwear shall be disposed of as contaminated waste or cleaned thoroughly inside and out using soap and water before removing from work area or from equipment and access area.

5. All disposable protective clothing shall be discarded and disposed of as asbestos waste when the wearer exits from the workspace to the outside through the decontamination facilities.

6. The color of the disposable clothing worn outside the work area shall be a different color than the disposable clothing worn inside the work area.

D. Decontamination Procedures:

1. Each worker and authorized visitor without exception shall, upon entering the job site: remove street clothes in the clean change room and put on an appropriate respirator with new filters, and clean disposable protective clothing before entering the equipment room or the work area, except that workers intending to re-wear previously worn protective clothing stored in the equipment room shall enter the equipment room wearing only respirators.

2. Each time he/she leaves the work area, each worker and authorized visitor shall:

   a. Vacuum gross contamination from clothing before leaving the work area.

   b. Proceed to the equipment room and remove all clothing except respirator.

   c. Still wearing the respirator, proceed unclothed into the showers.

   d. Clean the outside of the respirator with soap and water while showering.

   e. Remove filters, wet them, and dispose of filters in the container provided for that purpose.

   f. Wash and rinse the inside of the respirator. After showering, dry off with disposable towels.

3. Following showering and drying off, each worker and authorized visitor shall proceed directly to the clean change room and dress in street clothes at the end of the day's work, or before eating, smoking, or drinking.

4. Contaminated reusable work footwear shall be stored in the equipment room when not in use in the work area. Upon completion of asbestos abatement work, footwear shall be disposed of as contaminated waste or cleaned inside and out using soap and water before removing these items from the work area or from the equipment and access area. Contaminated protective clothing shall be stored in the equipment room for reuse or placed in receptacles for disposal with other asbestos-contaminated materials.

3.2 WORK AREA PREPARATION

A. Where necessary, within regulated areas, shut down electrical power, including receptacles and light fixtures. Under no circumstances during the abatement process

will existing lighting fixtures inside the regulated area be permitted to be operating. Provide GFCI devices, temporary power, and temporary lighting installed in compliance with the applicable electrical codes and by a licensed electrician. Electrical receptacles inside work area may not be used unless they are protected by GFCI devices.

B. Shut down and/or isolate heating, cooling, and ventilation air systems or zones to prevent contamination and fiber dispersal to other areas of the structure. During the work, vents within the work area shall be sealed with duct tape and polyethylene sheeting.

C. Seal off all openings, including, but not limited to, separations to occupied areas, windows, corridors, doorways, skylights, ducts, grills, diffusers, and any other penetration of the work areas, with polyethylene sheeting a minimum of six (6) mil thick, sealed with duct tape.

D. Remove moveable objects within the proposed work area to the extent possible before the work starts.

E. Pre-clean fixed objects within the work areas, using HEPA vacuum equipment and/or wet cleaning methods as appropriate, and enclose with a minimum six (6) mil plastic sheeting sealed with duct tape.

F. Clean the proposed work areas using HEPA vacuum equipment or wet cleaning methods as appropriate. Do not use methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters.

G. Install adequate number of HEPA ventilation units to achieve the required number of at least 4 air changes per hour and exhaust units to the exterior of the building.

3.3 DECONTAMINATION SYSTEM

A. The Contractor shall establish a decontamination enclosure (decon) contiguous to the work area consisting of equipment room, shower room, and clean room in series. The only access between contaminated and uncontaminated areas shall be through this decontamination enclosure.

B. Access between rooms in the decontamination system shall be through double-flap curtained openings. The clean room, shower room and the equipment room within the decontamination enclosure shall be completely sealed ensuring that the sole source of airflow through this area originates from uncontaminated areas outside the work area.

B. Construct the decontamination system with PVC, metal, or other equivalent rigid framing and cover both sides with a double layer of six (6) mil polyethylene sheeting, spray glued and taped at the joints.

3.4 MAINTENANCE OF THE WORK AREA

A. Acceptance of Asbestos Control Area: The Contractor shall not begin removal unless the APM is in attendance. The control area must be constructed, the decontamination facility prepared and the supplies to be used assembled, barriers properly constructed, openings sealed, and other preparations made to allow the removal operation to proceed. If conditions are not acceptable, the Contractor shall correct deficiencies to comply with the specifications.

3.5 ASBESTOS REMOVAL PROCEDURE - GENERAL

A. The Contractor shall have a designated "Competent Person" on the job at all times to ensure establishment of a proper enclosure system and proper work practices throughout project.

B. Abatement work will not commence until authorized by on-site APM (if applicable).

C. Spray asbestos materials with amended water using airless spray equipment or apply approved removal wetting agent to reduce the release of fibers during removal operation. The Consultant shall pre-approve the use of amended water as the wetting agent.

D. In order to maintain indoor airborne asbestos fiber concentrations to the minimum, the wet asbestos must be removed in manageable sections.

E. Fill disposal containers as removal proceeds, seal filled containers and clean containers before removal to equipment decontamination system. Wet clean each container thoroughly, double bag and apply caution label. Ensure that workers do not exit the work area thorough the equipment decontamination enclosure.

F. After completion of stripping work, all surfaces from which asbestos has been removed shall be wet brushed, using a nylon brush, wet wiped, and sponged or cleaned by an equivalent method to remove all visible material. During this work, the surfaces being cleaned shall be kept wet.

G. Remove and containerize all visible accumulations of asbestos-containing and/or asbestos-contaminated debris. During cleanup, utilize brooms, rubber dustpan, and rubber squeegees.

H. Sealed disposal containers, and all equipment used in the work area, shall be included in the cleanup and shall be removed from work areas via the equipment decontamination enclosure at an appropriate time in the cleaning sequence. All asbestos waste shall be placed in 6-mil polyethylene disposal bags and shall be double bagged in the equipment decontamination enclosure before removal from the site.

I. At any time during asbestos removal, should the APM suspect contamination of areas outside the work area(s), he/she shall cause all abatement work to stop until the Contractor takes steps to decontaminate these areas and eliminate the causes of such contamination. Unprotected individuals shall be prohibited from entering suspected contaminated areas until air sampling and visual inspections certify decontamination.

J. After completion of the initial final cleaning procedure but prior to encapsulation, a pre-sealant inspection shall be conducted by the APM. The pre-sealant inspection shall verify that ACM and residual dust has been removed from the work area.

3.6 ASBESTOS REMOVAL PROCEDURE – SHEETROCK/TAPING COMPOUND

A. Prior to beginning the removal of any sheetrock/taping compound, remove all movable objects from the work area.

B. Remove sheetrock and taping compound using the following procedure:

1. Wet the materials with amended water or detergent solution so that entire surface is wet. Do not allow puddle or run off to other areas.

2. Remove material in manageable sections and lower directly into waste bags or lined containers.

3. Remove entire ceiling in each location.

C. Debris and Waste

1. Wet all debris that is generated and pick up using shovel.

2. Place wetted debris into waste bag or lined container.

3. Roll up drop cloth to contain wetted debris, and place in labeled disposal bags

4. Place bagged waste in a second disposal bag and dispose of as asbestos waste.

D. After completion of all sheetrock/taping compound removal work, the Contractor shall conduct final cleaning. Ensure that no visible residue or debris remains on the structural ceiling joists or any other surface of work area.

3.7 ASBESTOS REMOVAL PROCEDURE – FLOOR TILE AND MASTIC

A. Prior to beginning the removal of any resilient floor covering, remove all movable objects from the work area. If applicable, remove items such as bookcases, counters, and radiators to access the floor tile and mastic that go underneath those items.

B. Remove resilient tile floor covering using the following procedure:

1. Dispose of any materials that have floor mastic on them as asbestos-containing waste. The contractor may have to perform selective destructive demolition, such as removing carpeting or partition walls, to access the tile.

2. Wet the floor with amended water, removal encapsulant, or detergent solution, so that entire surface is wet. Do not allow puddle or run off to other areas. If a removal encapsulant is used, use in strict accordance with manufacturer's instructions. Cover with sheet polyethylene to allow humidity to release tile from floor. Allow time for humidity and water or removal encapsulant to loosen tiles prior to removal.

3. Keep floor continuously wet throughout removal operation.

4. Remove all layers of tiles using a manual or powered spade, or stripping machine. Continuously mist floor in area with amended water, removal encapsulant or detergent solution. Wet any debris generated as necessary to keep continuously wet. Keep floor where tile has been removed continuously wet until after completion of mastic removal.

5. After completion of floor tile removal, the Contractor shall remove mastic adhesive. Floor mastics may be removed using mechanical methods such as a “bead/shot blast” machine and/or low odor chemical strippers in accordance with manufacturer’s instructions.

C. Debris and Waste

1. Pick up whole tiles, stack, place in boxes or wrap in felt, and place in labeled disposal bags. At the Contractor's option tiles may be placed directly into durable leak-tight containers.

2. Shovel broken tiles, mastic saturated absorbent materials, and debris into nylon reinforced grain bags that are placed in a disposal bag, or place directly in steel leak-tight drums.

3. Place bagged waste in a second disposal bag and dispose of as asbestos waste.

D. After completion of all resilient flooring and mastic removal work, the Contractor shall conduct final cleaning.

3.8 CONSULTANT AND SUSPENSION OF WORK

A. The Project Engineer (Martinez Couch & Associates, LLC) has designated Facility Support Services (FSS) to perform the duties of the Consultant for this Contract. The Consultant will also act as the APM for the project.

B. The removal work shall be reviewed by the Consultant. The Contractor will request an inspection at least 24 hours in advance of requiring the inspection.

C. During the progress of the work, the Consultant, following approval by the Project Engineer, shall have the right to make any changes, alterations, additions or omissions in the work or Specifications in accordance with the General Conditions.

D. The Consultant will recommend that the Project Engineer order a suspension of work based on a determination of risk of adverse health and safety impacts on the environment, workers, or the general public, or failure to comply with the Specifications/regulations. The Contractor and the Owner will be notified in writing of the reason and of the recommended resolution.

E. At the discretion of the Project Engineer, the Consultant will provide oversight and visual inspection services throughout the Contract's duration. It shall be the Contractor's responsibility to comply with pertinent work standards and regulations.

F. Upon completion of work in a defined work area, the Consultant will conduct a final visual inspection for the purpose of evaluating work completion. Unsatisfactory conditions shall be immediately corrected in a manner specified by the Consultant and the contract documents. Final payments shall be approved only after the Project Engineer receives all properly completed Waste Shipment Record Forms and other required documentation and records.

3.9 CONSULTANTS AIR SAMPLING RESPONSIBILITIES

A. Air sampling shall be conducted by the Consultant to ascertain the integrity of controls that protect the building from asbestos contamination.

B. Consultant's APM shall collect and analyze air samples during the following time periods:

1. Pre-Abatement Period: The APM may collect samples prior to abatement work to establish baseline readings. These samples will be collected in and around the proposed work areas. Pre-abatement air samples shall be collected as required to obtain a volume of 1,200 liters. Pre-abatement and during abatement Samples shall be analyzed by PCM methodology using the NIOSH 7400 protocol.

2. Abatement Period: The APM may collect samples when onsite on a daily basis during the work period. A sufficient number of area samples shall be taken outside of the work area to judge the degree of cleanliness or contamination of the building during removal. Additional samples may be taken inside the work area at the discretion of the APM.

3. Post-Abatement Period: As required by the regulation, the APM shall conduct air sampling following the final cleanup phase of the project, once the "no visible residue" criterion, as established by the project monitor, has been met. Five (5) samples shall be collected inside the work area utilizing aggressive methods to comply with the State of Connecticut Department of Public Health Standards for Asbestos Abatement, sections 19a-332a-12. Analysis of the samples to determine airborne concentrations of asbestos shall be conducted by Transmission Electron Microscopy (TEM) method with an upper limit of 70.0 structures per square millimeter (s/mm^2) as an average concentration of airborne fibers in five (5) samples; or by Phase Contrast Microscopy (PCM) to show that the concentration of fibers for each of the five (5) samples is less than or equal to a limit of quantitation for PCM - 0.01 fibers per cubic centimeter (0.01 f/cc) of air in accordance with the above regulations.

C. At the direction of the Owner, the APM shall provide ongoing evaluation of the air quality within the building during removal, using his/her best professional judgments with respect to the State of Connecticut Department of Public Health guideline of 0.010 fibers/cc and the background air quality established during the pre-abatement period.

D. If the APM determines that the building air quality has become contaminated from the project, he/she shall immediately inform the Contractor to cease all removal operations and implement a work stoppage clean up procedure. The Contractor shall conduct a thorough cleanup of the areas of the building designated by the Consultant. No further removal work can take place until the APM has assessed that the building air has been decontaminated.

3.10 CONSULTANT'S INSPECTION RESPONSIBILITIES

A. Inspections shall be conducted by the APM as required, throughout the progress of the abatement project. Inspections shall be conducted in order to document the

progress of the abatement work as well as the procedures and practices employed by the Contractor.

B. The APM shall perform the following inspections during the course of abatement activities:

1. Pre-commencement Inspection (optional). Pre-commencement inspections may be performed at the time requested by the Contractor. The APM shall be informed sufficiently in advance of the time the inspection is needed. During the course of the pre-commencement inspection, the APM shall inspect the containment and surrounding work areas. This shall include, but not be limited to, inspection of barrier integrity, worker decontamination facility, utilization of power sources, and location and capacity of negative air filtration devices. If, during the course of the pre-commencement inspection, deficiencies are found, the Contractor shall perform the necessary adjustments in order to obtain compliance.

2. Work Area Inspections. Work area inspections may be conducted on a daily basis at the discretion of the Project Engineer. During the course of the work inspections, the APM shall observe the Contractor's removal procedures, verify barrier integrity, monitor negative air filtration devices, assess project progress, and inform the Contractor of specific remedial activities if deficiencies are noted.

3. Pre-sealant Final Visual Inspection. A pre-sealant inspection for each work area shall be conducted by the APM upon the request of the Contractor. The pre-sealant inspection shall be conducted after completion of the initial cleaning procedures, but prior to encapsulation. The pre-sealant inspection shall verify that no visible ACM or residual debris remain in the work area. If, during the course of the pre-sealant inspection, the APM identifies visible residual ACM or debris, the Contractor shall re-clean the work area until it is deemed acceptable by the APM.

3.11 WASTE DISPOSAL

A. All waste material shall be promptly wetted and placed in 6-mil polyethylene bags or wrapped in two layers of 6-mil polyethylene plastic sheeting as it is generated. A sufficient number of waste bags and/or plastic sheeting shall be located in the immediate work area (unused bags in the equipment room of the decontamination facility must be disposed of as contaminated waste). The Contractor shall count or measure the volume of each filled container leaving the work area, and maintain a written record of such.

B. Warning labels, having waterproof print and permanent adhesive, shall be affixed to the sides of all waste bags or transfer containers. Warning labels shall be

conspicuous and legible, and contain the following words in accordance with OSHA 1926.1101:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

In addition to the above, affix 'waste generator label' to include the generator's name and address on each waste container. Waste transport vehicles will have appropriate U.S. Department of Transportation signage on them for transportation of asbestos waste materials.

C. A fine water spray shall be used to keep the unbagged or unwrapped waste damp at all times.

D. Sealed waste shall be removed from the work area and stored in an on-site, enclosed, lined, and lockable dumpster or transported to the landfill. The temporary storage dumpster area shall be prominently identified and be kept locked.

E. Once a truckload of waste containers has accumulated, the Contractor shall arrange for transportation to the landfill. No temporary co-mingling of asbestos waste from this project with that from another site will be allowed.

F. Waste Transportation and Disposal Regulations:

1. It is the responsibility of the Contractor to determine and ensure compliance with the current waste handling regulations applicable to the work site and the current regulations for waste transportation to and disposal at each ultimate landfill. The Contractor shall comply fully with these regulations and with all U.S. Department of Transportation, EPA, and State of Connecticut Department of Energy and Environmental Protection (CTDEEP) requirements.

2. If required, the Contractor (or Subcontractor), at no additional cost, shall maintain a valid hazardous waste transporter's permit and identification number, and document and fully comply with any hazardous waste manifesting requirements.

G. Waste Disposal Procedure:

1. The Contractor shall incorporate in his/her proposal the estimated quantity of asbestos waste disposal to be generated during the work; the proposed final waste site; the estimated number of separate waste shipments (loads), and the current estimated transportation and landfill disposal fees (per cubic yard). Non-contaminated waste transport and disposal shall be solely the

Contractor's responsibility. The Contractor shall review each of these items and resolve any discrepancies or deficiencies during the pre-construction site meeting.

2. The Contractor shall package, label, and remove all asbestos waste as specified in the specifications. Packaging shall be accomplished in a manner that minimizes waste volume, but so that waste containers will not tear or break.

3. The Contractor shall verify the total volume of waste material to be removed from the site (total count of waste containers and total volume estimate to the nearest 0.5 cubic yard), and insert the quantity on the Waste Shipment Record and on a hazardous waste manifest if required.

4. The Contractor shall provide legal transportation of this waste to the ultimate disposal landfill; and have the waste hauler and the landfill owner complete all other required manifests, dump slips, or other forms. The completed and fully signed (by all required parties) original of the Waste Shipment Record, and copies of the other forms, shall be returned within thirty (30) calendar days to the Owner for payment approval. <u>No payments will be approved, or made for incomplete Waste Shipment Records</u>.

5. All disposal of asbestos-containing and/or asbestos-contaminated material must be in compliance with requirements of and authorized by the Solid Waste Management Division, State of Connecticut Department of Energy and Environmental Protection (CTDEEP).

H. Waste Disposal Fees:

1. All Contractor contaminated waste handling costs, such as waste packaging, on-site/off-site storing/handling, transport/disposal, permitting, record keeping, and non-contaminated waste handling must be included in the Contractor's proposal as applicable to removal of asbestos materials and/or performance of the related abatement activities.

3.12 PROJECT RESTORATION

A project walk-through shall be conducted after the abatement portion of the project to identify areas or equipment damaged during the work. If the Project Engineer determines that the damage is caused by acts or omissions of the Contractor, a punch list shall be developed. The Contractor shall be responsible for repair or replacement, or at the discretion of the Owner, payment for the work of another Contractor to complete the punch list. A second walk through shall be conducted after completion of punch list items.

END OF SECTION

CERTIFICATE OF WORKER'S ACKNOWLEDGMENT

PROJECT NAME _____ DATE _____

PROJECT ADDRESS _____

CONTRACTOR'S NAME _____

WORKING WITH ASBESTOS CAN BE DANGEROUS. INHALING ASBESTOS FIBERS HAS BEEN LINKED WITH VARIOUS TYPES OF CANCER. IF YOU SMOKE AND INHALE ASBESTOS FIBERS THE CHANCE THAT YOU WILL DEVELOP LUNG CANCER IS GREATER THAN THAT OF THE NON-SMOKING PUBLIC.

Your employer's contract with the Project Engineer for the above project requires that: You be supplied with the proper respirator and be trained in its use; You be trained in safe work practices and in the use of the equipment found on the job; You receive a medical examination; These things are to have been done at no cost to you.

RESPIRATORY PROTECTION: You must have been trained in the proper use of respirators, and informed of the type respirator to be used on the above referenced project. You must be given a copy of the written respiratory protection manual issued by your employer. You must be equipped at no cost with the respirator to be used on the above project.

TRAINING COURSE: You must have been trained in the dangers inherent in handling asbestos and breathing asbestos dust and in proper work procedures and personal and area protective measures. The topics covered in the course must have included the following:

Physical characteristics of asbestos
Health hazards associated with asbestos
Respiratory protection
Use of personal protective equipment
Pressure Differential Systems
Work practices including hands on or on-job training
Personal decontamination procedures
Air monitoring, personal and area

MEDICAL EXAMINATION: You must have had a medical examination within the past 12 months at no cost to you. This examination must have included: health history, pulmonary function tests and may have included an evaluation of a chest x-ray.

By signing this document you are acknowledging only that the Owner of the building you are about to work in has advised you of your rights to training and protection relative to your employer, the Contractor.

Signature _____

Printed Name _____

Social Security # _____

Witness _____

SECTION 02 83 19.13

LEAD BASED PAINT ABATEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. 'Lead Hazard Remediation Project, 54 Rainbow Road, Bridgeport, CT' prepared by Gilberto Lead Inspections LLC.

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION

All work, labor, and materials shall be accordance with 'Lead Hazard Remediation Project, 54 Rainbow Road, Bridgeport, CT' prepared by Gilberto Lead Inspections LLC.

Part 1 General

1.1 SCOPE

A. The work specified herein includes lead paint hazard reduction in accordance with The Department of Housing and Urban Development (HUD) Lead Safe Housing Rule (24 CFR 35) for all components and surfaces containing defective toxic levels of lead paint. The work shall be conducted to satisfy the requirements of federal HUD standards. Testing was performed in accordance with HUD and State of Connecticut protocols.

Property Information:

Address: 54 Rainbow Road, Bridgeport, CT
(A single family residence)

Property Owner: Lorna Hewitt
54 Rainbow Road, Bridgeport, CT

Lead Testing Performed by:

Maureen Monaco – Lead Inspector /Risk Assessor #1172

Gilbertco Lead Inspections LLC- Consultant Contractor #270
287 Main Street
Ansonia, CT 06401
1-800-959-2985

Date of testing: May 21, 2014

Methodology: Handheld Scitec Map 4 (Keymaster/Bruker) XRF spectrum analyzer, K Shell emissions

Resident Information:

Lorna Hewitt and family member. No children under the age of six in residence.

B. Prior to abatement or interim controls, repair work including but not limited to the repair of any leaks related to the deterioration of lead based painted surfaces is required. None required.

C. Abatement or Lead Hazard Remediation includes the following methods:

- Replacement by removing components such as windows, doors, and trim that have lead painted surfaces and installing new lead free components. Architectural replacement components shall conform with all contract requirements and specifications. Product submittals

shall conform with requirements of Section 01 33 – Submittal Procedures

- Rigid enclosure using enclosure system by mechanically attaching a rigid durable barrier covering building components with all edges and seams sealed with caulk or other sealant. Enclosures are intended to prevent access and exposure to lead painted surfaces and provide a "dust –tight" system to trap and lead contaminated dust.

  Appropriate enclosure materials include:

Surface Location	Covering Material
Exterior Trim	Aluminum or vinyl coil stock
Exterior Finish	Aluminum or vinyl siding
Interior Finish	Drywall, wainscoting
Steps	Vinyl or rubber tread and riser coverings
Floors	Underlayment and vinyl

- Liquid Encapsulation by application of an approved liquid coating that acts as a barrier between lead based paint and the environment.

- Paint removal by separation of lead paint from the surface of components. This activity may include the following methods when performed with the proper conditions and engineering controls:
  1. Mechanical removal by wet scraping or HEPA needle gun.
  2. Chemical removal by use of strippers in accordance with manufacturer's specifications.
  3. Heat Gun by heating the painted surface utilizing proper engineering controls and when temperature does not exceed 700 degrees F.

- Soil Hazard Reduction Methods may include

  1. Removal and replacement of lead contaminated soil by removing the top 2-6 inches of lead contaminated soil, disposing it in accordance with federal and state standards and replacing it with new lead free soil. EPA Guidance recommends this method when lead levels exceed 500 ppm.

  2. Permanent Cover of bare soil areas with concrete, asphalt, or other permanent materials; EPA Guidance recommends this method when lead concentrations in soil exceed 5000 ppm.

3. Interim controls may include covering lead contaminated soil with grass, gravel, mulch, or restrictive elements such as fences, shrubbery, or decking to prevent access to contaminated soil. Interim controls require periodic monitoring to ensure that the cover or controls are in place.

D. Interim controls may be performed by personnel who have received the Renovate Right Certification from the EPA. Interim Controls are measures designed to temporarily reduce human exposure or likely exposure to lead paint hazards, including specialized cleaning, repairs, maintenance painting, and temporary containments.

E. The Contractor shall provide all labor, materials, equipment, services, insurance, supervision, and incidentals which are necessary or required to perform the work of lead paint remediation in accordance with applicable governmental regulations and these specifications.

F. The Contractor is responsible for restoring all auxiliary areas utilized during abatement to conditions equal to or better than original. The contractor shall, at no additional expense to the building owner, repair any damage caused to auxiliary areas during the performance of abatement activities.

G. The Contractor will protect and preserve in operating conditions, including all utilities transversing the building and site. Damage to any utility due to work under this contract shall be repaired to the reasonable satisfaction and at no cost to the building owner.

H. The Contractor shall coordinate work schedule and site access with the building owner. The contractor shall submit a schedule or work and shall be approved by the building owner prior to the commencement of work. The contractor shall be responsible for securing the building for the duration of the work.

I. The Contractor shall be responsible for removing and decontaminating movable objects from the work area. This should be coordinated with the building owner.

1.2 DESCRIPTION OF WORK

A. The site is a two story, cape style residential home built about 1964. The exterior of the home is vinyl sided with most windows being vinyl replacements.

B. The scope of work includes replacing a second floor left bedroom window.

C. An EPA Certified Renovate Right Contractor or a CT Licensed Lead Abatement Contractor will be utilized to perform the required work.

D. All required lead based paint abatement work shall be conducted in compliance with HUD regulation 24 CFR Part 35.

E. Lead based paint is present on the similar painted components in the areas of the project as found in the inspection report attached. It is the responsibility of the Contractor to comply with the OSHA Construction industry Standard 29 CFR 1926.62 when conducting abatement activities which may disturb materials with lead based paint.

1.3 PERSONAL PROTECTION

A. Prior to commencement of work, instruct all workers in all aspects of personal protection, work procedures, emergency evacuation procedures and use of all equipment. A formal respiratory protection program including respiratory protection must be implemented in accordance with 29 CFR 1926.26 and 29 CFR 1910.134.

B. Contractor will provide appropriate respiratory and filters for protection equipment for each worker and ensure usage during potential dust exposure. Respirators shall be approved by the National Institute for Occupational Safety and Health under 30 CFR Part 11.

C. Contractor will provide and require workers to wear protective clothing in work areas where lead dust concentrations exceed permissible exposure limits established OSHA. This includes impervious coveralls with elastic wrists and ankles, head covering, gloves, and foot coverings.

1.4 PREPARATION OF LEAD CONTROL AREA

A. Post warning signs meeting EPA Renovate Right Program at each entrance and exit. Notification to tenants or owner must be made in writing.

B. Install an impermeable cloth or vinyl on ground under work area to collect paint dust, chips, and debris.

C. Remove movable objects within the proposed work area and enclose those items remaining with a minimum of 6 mil poly, sealed with tape.

1.5 LEAD REMOVAL

A. A competent person shall be on the job site at all times to ensure proper work practices are followed.

B. Utilize wet methods to remove lead based paint and painted components in accordance with 29 CFR 1926.62 utilizing fine mist to moisten surface to prevent lead dust from becoming airborne.

C. At the end of each work shift remove and place all visible accumulation of paint chips and associated dust and debris. This includes rags, sponges and protective clothing.

D. The following practices are prohibited:
- Dry scraping
- Power tools for grinding, sanding, and cutting without HEPA vacuum dust collection

1.6 CLEAN-UP , VISUAL INSPECTION, FINAL INSPECTION

A. After a visual inspection, the Contractor will remove impermeable drop cloths.

B. The contractor will call Gilbertco Lead Inspections LLC (1-800-959-2985) or Facilities Support Services LLC at 1-203-288-1281 to do a visual inspection of the interior and exterior of the project to detect incomplete work, visible debris, or damage cause by abatement or remediation activity. Clearance testing of surfaces in the vicinity of remediation work will be obtained until reoccupancy criteria of 40mg/ft2 on floors and 250 mg/ft2 on window sills is met. Contractor is responsible for providing lead free surfaces around all work areas following completion of activity.

1.7 DISPOSAL OF HAZARDOUS LEAD BEARING WASTE

A. Materials associated with the abatement shall be disposed of as hazardous waste with a TCLP reading >5 mg/l. The contractor shall obtain a small quantity hazardous waste generator ID number from the State of Connecticut DEEP for the site, if hazardous waste generated exceeds 100 kilograms per month. Materials associated with this abatement include:
- Any lead containing or lead based paint debris
- Wood painted with lead based paint
- Stripped paint or paint chips

- Painted wall or ceiling plaster
- Painted concrete debris

B. Disposal of all hazardous waste shall comply with the requirements of Resource Conservation and Recovery Act (RCRA).

C. Contractor can wipe clean polyethylene sheeting and dispose of it as construction debris.

D. Dumpsters containing hazardous waste are to be kept covered and locked when not in active use for lading of materials.

E. All containers of hazardous lead bearing material shall carry the following label in accordance with 29 CFR 1926.62.

HAZARDOUS LEAD WASTE

Federal Law prohibits improper disposal.
If found, contact the nearest police or public safety authority,
or the U.S. Environmental Protection Agency
Generator Information:
Facility Name: _____
Facility Address: _____
Facility Phone Number: _____
EPA ID / Manifest Document #: _____
Accumulation Start Date: _____
EAP Waste #: _____
HAZARDOUS WASTE SOLID NUMBERS
ORM-E NA 9189 D008
HANDLE WITH CARE

F. Payment for disposal of hazardous waste will not be made until a signed copy of the manifest from the treatment or disposal facility certifying the amount of lead-containing materials is returned and a copy is furnished.

SECTION 02 85 00

MOLD REMEDIATION

The following work plan outlines the microbial mold abatement of 54 Rainbow Road, Bridgeport, Connecticut.

1. The Contractor shall have a designated Competent Person: on the job at all times to ensure proper work practices throughout the project.
2. Prior to beginning the clean-up and decontamination process, the contractor shall install at a minimum, a one-stage decontamination unit at the entrance to the area.
3. Workers shall don the proper PPE following 29 CFR 1910.120 prior to beginning the removal. This may include respiratory protection and. or disposable full body coveralls.
4. Microbial abatement shall be implemented using the following procedure:
   a. If visible mold growth is observed:
      i. Mold contaminated waste materials shall be handled and removed from specified locations for proper disposal.
      ii. Materials shall be removed in a manner which does not breakdown the materials into fine dust or powder to the extent feasible. Equipment and tools to be utilized shall include hand tools only to remove materials from adjacent substrates.
      iii. Any dry or brittle materials shall be removed with additional engineering controls such as use of a HEPA vacuum to removed accumulated dust or debris during removal.
      iv. Waste shall be immediately placed in disposal containers/storage trailers. The containers shall not be empties into other containers to avoid dispersal of dust or fugitive emissions.
      v. The use of minimal but sufficient quantities of water to wet the generated waste prior to collection shall be utilized. Under no circumstances shall the mold waste show evidence of free liquid water, pooling or ponding with the waste stream. Any liquid used to wet the dust and debris to control fugitive emission shall be properly containerized and decontaminated in accordance with CHS Section 22a-463 through 22a-469.
   b. All remaining surfaces that are disturbed during renovation or demolition.
      i. Spray one coat of Shockwave Disinfectant & Cleaner (or similar) to all surfaces per the manufacturer's specifications. This includes all floors, walls, and ceilings. Alternate products must be approved by the project consultant.
      ii. Spray one coat of Aftershock fungicidal coating (or similar) to all surfaces per the manufacturer's specifications. This includes all floors, walls, and ceilings. Alternate products must be approved by the project consultant.

SECTION 07 31 00

ASPHALT ROOF SHINGLES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Asphalt Roofing Shingles.

B. Leak Barrier and Moisture Shedding Roof Deck Protection.

C. Metal Flashing Associated with Shingle Roofing.

D. Related Accessories.

1.2 REFERENCES

A. American National Standards Institute (ANSI/ASSE).

B. Asphalt Roofing Manufacturers Association (ARMA).

C. American Society of Civil Engineers (ASCE).

D. ASTM International (ASTM).

E. National Roofing Contractors Association (NRCA).

F. Occupational Safety and Health Administration (OSHA).

G. Sheet Metal and Air Conditioning Contractors' National Association (SMACNA).

H. Underwriters Laboratories (UL).

I. U.S. Green Building Council (USGBC).

1.3 SUBMITTALS

A. Submit under provisions of Section 01 30 00.

B. Manufacturer's data sheets on each product to be used, including:
   1. Material descriptions, dimensions, and profiles.
   2. Preparation instructions and recommendations.
   3. Storage and handling requirements and recommendations.
   4. Installation methods.

C. Submit Material Safety Data Sheets (MSDS) prior to commencement of work for review and for filing at job site as required.

D. Selection Samples: Two complete sets of color cards representing manufacturer's full range of available colors and patterns.

1.4 QUALITY ASSURANCE

A. Installer Minimum Qualifications:
   1. Installer shall be classified as an Authorized contractor as defined and certified by manufacturer.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened labeled packaging until ready for installation.

B. Store products in a covered, ventilated area, at temperature not more than 110 degrees F (43 degrees C); do not store near steam pipes, radiators, or in sunlight.

C. Store bundles on flat surface to maximum height recommended by manufacturer; store rolls on end.

D. Store and dispose of solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.6 WEATHER CONDITIONS

A. Proceed with work only when existing and forecasted weather conditions will permit work to be performed in accordance with manufacturer recommendations.

1.7 WARRANTY

A. Provide Manufacturer's standard warranty.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers: Subject to compliance with requirements, available manufactures offering products that may incorporated into the Work include the following:
   1. Atlas Roofing Corporation.
   2. CertainTeed Corporation.
   3. GAF.
   4. Owens Corning.
   5. PABCO Roofing Products.

B. Substitutions: or approved equal.

C. Requests for substitutions will be considered in accordance with Section 01 60 00.
   1. When submitting request for substitution, provide complete product data and sample warranty specified above under submittals, for each substitute product.

2.2 ASPHALT SHINGLES

A. Style: 3 Tab asphalt shingle or match existing.
   1. Shingle Thickness: Match existing.
   2. Color: Match existing or selected by Owner.
   3. Warranty: Match original warranty of existing materials.

2.3 HIP AND RIDGE SHINGLES

A. Hip and ridge cap shingle field fabricated from the same color and type of field shingle.

2.4 STARTER STRIP

A. Self sealing starter shingle designed for all roof shingles.

2.5 UNDERLAYMENT

A. #15 Roofing Underlayment: Water repellent breather type cellulose fiber building paper. Meets or exceeds the requirements of ASTM D 4869 Type I.

B. Plywood Sheathing; replacement and/or repair of existing sheathing as required during course of construction.

2.6 ACCESSORY PRODUCTS

A. Fasteners
   1. Standard round wire shingle type, zinc-coated steel or aluminum; 10 to 12 gauge (3.416 mm to 2.657 mm for steel) (2.588 mm to 2.052 mm for aluminum), barbed or deformed shank, with heads 3/8 inch (9.5 mm) to 7/16 inch (11 mm) in diameter; length sufficient to penetrate at least 3/4 inch (19 mm) into solid wood or just through plywood or oriented strand board.

B. Roofing Cement:
   1. Asphalt Roofing Cement: ASTM D 4586, Type II, asbestos free.

C. Metal Flashing:
   1. 16 oz/sq ft (0.56 mm) copper sheet, complying with ASTM B 370.
   2. 0.032 inch (0.8 mm) aluminum sheet, complying with ASTM B 209.
   3. Use metal flashings at:
      a. Eave edges: Match existing materials.
      b. Rake edges: Match existing materials.
      c. Step flashing at chimneys, side walls and dormers: Match existing materials.
      d. Valleys: Match existing materials.

D. Metal Flashing:
   1. Fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions metal, and other characteristics of the item.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until roof deck has been properly prepared.

3.2 REMOVAL OF EXISTING ROOFING

A. Remove all existing roofing down to the roof deck.

B. Verify that deck is dry, sound, clean and smooth, free of depressions, waves and projections.

C. Cover with sheet metal all holes over 1 inch (25 mm) diameter, cracks over 1/2 inch (12 mm) in width, loose knots and excessively resinous areas.

D. Replace damaged deck with new materials.

E. Clean deck surfaces thoroughly prior to installation of eaves protection membrane and underlayment

3.3 PREPARATION

A. Clean deck surfaces thoroughly prior to installation of leak barrier and roof deck protection.

B. At areas to receive leak barrier, fill knot holes and cracks with latex filler.

3.4 INSTALLATION OF UNDERLAYMENT

A. Install using methods recommended by manufacturer in accordance with local building code. When local codes and application instructions are in conflict, the more stringent requirements shall take precedence.

B. Eaves:
1. Place eave edge metal flashing tight with fascia boards; lap joints 2 inches (50 mm) and seal with plastic cement; nail at top of flange.
2. Install leak barrier up the slope from eave edge to 36 inches from the edge or at least 24 inches (610 mm) beyond the interior face of the warm exterior wall, whichever is greater; lap ends 6 inches (150 mm) and bond.

C. Valleys:
1. Install leak barrier at least 36 inches wide centered on valley; lap ends 6 inches (150 mm) and seal.
2. Where valleys are indicated to be "open valleys", install metal flashing over leak barrier before roof deck protection is installed; DO NOT NAIL THROUGH metal flashing; secure by nailing at 18 inches (457 mm) on center just beyond edge of flashing so that nail heads hold down edge.

D. Hip and Ridge:
1. Install leak barrier along entire lengths. If ridge vents are to be installed, position the leak barrier so that the ridge slots will not be covered.

E. Penetrations:
1. At vent pipes, install a 24 inch (610 mm) square piece of leak barrier lapping over roof deck protection; seal tightly to pipe.
2. At vertical walls, install leak barrier extending at least 6 inches (150 mm) up the wall and 12 inches (305 mm) on to the roof surface lapping over roof deck protection.
3. At skylights and roof hatches, install leak barrier up the sides of the frame and 12 inches (305 mm) on to the roof surface on all sides, lapping over roof deck protection.
4. At chimneys, install leak barrier around entire chimney extending at least 6 inches (152 mm) up the wall and 12 inches (305 mm) on to the roof surface lapping over roof deck protection.

5. At rake edges, install metal edge flashing over leak barrier and roof deck protection; set tight to rake boards; lap joints at least 2 inches (50 mm) and seal with plastic cement; secure with nails.
6. At hips and ridges, install leak barrier along entire lengths. If ridge vents are to be installed, position the leak barrier so that the ridge slots are not covered.

3.5 INSTALLATION OF SHINGLES

A. Install in accordance with manufacturer's instructions and requirements of local building code.
   1. Avoid breakage of shingles by avoiding dropping bundles on edge, by separating shingles carefully (not by "breaking" over ridge or bundles), and by taking extra precautions in temperatures below 40 degrees F (4 degrees C).
   2. Handle carefully in hot weather to avoid damaging shingle edges.
   3. Secure with 4 to 6 nails per shingle; use number of nails required by manufacturer or by code, whichever is greater. Nails must be long enough to penetrate through plywood or OSB, or 3/4 inch (19 mm) into dimensional lumber.

B. Install hip, ridge, and valley shingles as required by the manufacturer.
   1. At ridges, install hip and ridge shingles over ridge or ridge vent material.

C. All penetrations are to be flashed according to manufacturer, ARMA and NRCA application instructions and construction details.

D. For skylights, consult the manufacturer of the skylight or roof hatch for specific installation recommendations. Skylights and roof hatches shall be installed with pre-fabricated metal flashings specifically designed for the application of the unit.

END OF SECTION

SECTION 07 71 23

GUTTERS AND DOWNSPOUTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Gutters and Downspouts.

B. Related Accessories.

1.2 REFERENCES

A. American Architectural Manufacturers Association (AAMA).

B. ASTM International (ASTM).

C. Occupational Safety and Health Administration (OSHA).

D. Sheet Metal and Air Conditioning Contractors' National Association (SMACNA).

1.3 SUBMITTALS

A. Submit under provisions of Section 01 30 00.

B. Manufacturer's data sheets on each product to be used, including:
   1. Material descriptions, dimensions, and profiles.
   2. Preparation instructions and recommendations.
   3. Storage and handling requirements and recommendations.
   4. Installation methods.

C. Submit Material Safety Data Sheets (MSDS) prior to commencement of work for review and for filing at job site as required.

D. Maintenance Data: Include recommended cleaning methods and cleaning materials.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store products to prevent twisting, bending, and abrasion, and to provide ventilation. Slope stored materials to drain.

C. During storage prevent contact with materials capable of causing discoloration, staining, or other damage.

1.5 WARRANTY

A. Provide Manufacturer's standard warranty.

PART 2 PRODUCTS

2.1 GENERAL

A. Gutter Material Thickness: Match existing materials.

B. Downspout Material Thickness: Match existing materials.

2.2 GUTTERS

A. Gutter Stock (Aluminum, Vinyl, Etc): Match existing materials.
   1. Gutter Size: Match existing.
   2. Profile: Match existing.
   3. Texture: Match existing.
   4. Finish: Match existing finish; applied to sides as matching.
   5. Color: Match existing.

B. Accessories:
   1. Gutter Protection System: Match existing. Size and shape as required for gutter size, style and gutter support. Provide factory fabricated inside and outside corners.
   2. Miscellaneous Components: Provide all necessary inside and outside corners, corner reinforcing, eave tubes, and end caps required for a complete installation.

2.3 DOWNSPOUTS

A. Downspout Stock (Aluminum, Vinyl, Etc): Match existing materials.
   1. Downspout Size: Match existing.
   2. Profile: Match existing.
   3. Texture: Match existing.
   4. Finish: Match existing finish; applied to sides as matching.
   5. Color: Match existing.

B. Accessories:
   1. Downspout Support: Match existing materials. Profile and color to match existing.
   2. Miscellaneous components: Provide all necessary elbows, downspout offset sections, and pop rivets as required for a complete installation. All miscellaneous components shall match downspouts.

2.4 RELATED ACCESSORIES

A. Fasteners: Match existing materials.
   1. Finish: Match existing finish.
   2. Size: As recommended by manufacturer.

B. Flashings: Match existing or where installation is recommended by Manufacturer. Colors to match existing.

C. Sealants: Mildew-Resistant Joint Sealant as recommended by Manufacturer at gutter joints. Color shall match existing.

D. Splash Pans: Match existing in materials, size, shape, and color.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that substrates are in place and ready for installation of gutters and downspouts.

3.2 INSTALLATION

A. General: Install gutters and downspouts per manufacturer's written installation instructions. Install Work securely in place and provide for expansion and contraction of components using lapped and sealed joints.

B. Install roof apron flashings at roof edge conditions as required for proper installation, and matching existing conditions.

C. Gutters:
1. Install gutter supports as per Manufacturer recommendations.
2. Slope gutters evenly to downspouts; provide end caps at gutter ends and seal watertight per Manufacturer's instructions.
3. Install eave tubes at all downspout locations, seal watertight.
4. Apply joint sealants at gutter joints per Manufacturer's installation instructions.
5. Install gutter protection per manufacturer's instructions; provide factory fabricated corners at all inside and outside corners.

D. Downspouts:
1. Install downspouts, provide elbows and offsets, and secure downspouts to wall construction using downspout supports spaced as per Manufacturer's instructions. Provide 45 degree elbow at bottom of downspout to direct water away from wall surface or foundation.
2. Where downspout connects to building perimeter drainage system, lap downspout and perimeter drainage pipe a minimum of 3 inches. At concrete perimeter drainage pipe, grout downspout in place, slope grout to shed rain away from downspout.
3. Install splash pans under downspouts.

END OF SECTION

SECTION 08 31 13

ACCESS DOORS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Access Doors

1.2 RELATED SECTIONS

A. American National Standards Institute (ANSI/ASSE).

B. ASTM International (ASTM).

C. Occupational Safety and Health Administration (OSHA).

D. Underwriters Laboratories (UL).

E. Window and Door Manufacturers of America (WDMA).

1.3 ACTION SUBMITTALS

A. Comply with Section 01 33 00 – Submittal Procedures

B. Product Data: Submit Manufacturer's Product Data, including installation instructions.

1. Include construction details, material descriptions, dimensions of individual components and profiles, finishes

1.4 MANUFACTURERS

A. Acceptable Manufacturers: Subject to compliance with requirements, available manufacturers that may be incorporated into the work include the following,

1. Bilco Corporation
2. Gordon Corporation

1.5 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Storage: Store materials indoors in a clean, dry area in accordance with manufacturer's instructions.

C. Handling: Protect materials and finishes from damage during handling and installation.

PART 2 - PRODUCTS

2.1 MANUFACTUER

2.2 EXTERIOR GENERAL PURPOSE ACCESS DOORS
Description: Weatherproof assembly, with face of door fit flush with frame and with exposed frame. Include extruded door gaskets and minimum 2-inch-thick (50-mm-thick) fiberglass insulation.

1. Door Location: Match Existing
2. Door Size: Match Existing
3. Door and Trim: 14 gauge steel. Trim 1-1/2 inches wide.
4. Return Frame: 18 gauge steel. Depth 1-3/4 inches.
5. Hinges: Fully concealed. Opens 170 degrees. On long side of door. Number of hinges varies with size of door.
6. Latches: Flush, stainless steel cam-operated with screw driver. Positioned opposite hinge and at top and bottom on larger sizes.
7. Finish: Factory Primed or Finished
8. Masonry Anchor Straps: Minimum of 4 straps per door.
9. Screws: Tamper Proof.
10. Gaskets: Weather-resistant and air-tight neoprene gaskets.

2.3 FABRICATION

A. General: Provide access door and frame assemblies manufactured as integral units ready for installation.

B. Metal Surfaces: For metal surfaces exposed to view in the completed Work, provide materials with smooth, flat surfaces without blemishes. Do not use materials with exposed pitting, seam marks, roller marks, rolled trade names, or roughness.

C. Doors and Frames: Grind exposed welds smooth and flush with adjacent surfaces. Furnish mounting holes, attachment devices and fasteners of type required to secure access doors to types of supports indicated.

D. Aluminum: After fabrication, apply manufacturer's standard protective coating on aluminum that will come in contact with concrete.

2.4 FINISHES

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

D. Painted Finishes: Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.

1. Factory Primed: Apply manufacturer's standard, lead- and chromate-free, universal primer immediately after surface preparation and pretreatment.
2. Factory Finished: Apply manufacturer's standard baked-enamel or powder-coat finish immediately after cleaning and pretreating, with minimum dry-film thickness of 1 mil (0.025 mm) for topcoat.

    a. Color: To be chosen by owner.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to receive access doors. Notify Architect if areas are not acceptable. Do not being installation until unacceptable conditions have been corrected.

3.1 INSTALLATION

A. Install access doors in accordance with manufacturer’s instructions at locations indicated on the drawings.
B. Install access doors plumb, level, square, ridged, without warp or rack.
C. Install weather proofing/stripping along all contact surfaces with building foundation/access stair.
D. Provide Proper support for frames.
E. Anchor frames securely in place.
F. Use manufacturer’s supplied hardware.
G. Replace defective or damaged doors or other components as directed by Architect.

3.3 ADJUSTING

A. Adjust access doors and latches for smooth operation without binding.
B. Inspect and adjust locks to operate properly.
C. Touch-up marred finishes with manufacturer supplied paint.

3.4 CLEANING

A. Clean Surfaces in accordance with manufacturer’s instructions.
B. Do not use abrasive cleaners.

3.5 PROTECTION

A. Protect access doors and finish from damage during construction.

SECTION 09 26 00

GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Gypsum Board and Joint Treatments.

B. Mold and Mildew Resistant Gypsum Board.

C. Related Accessories.

1.2 REFERENCES

A. American National Standards Institute (ANSI/ASSE).

B. ASTM International (ASTM).

C. Gypsum Association (GA).

D. Occupational Safety and Health Administration (OSHA).

E. Underwriters Laboratories (UL).

1.3 SUBMITTALS

A. Submit under provisions of Section 01 30 00.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

C. Submit Material Safety Data Sheets (MSDS) prior to commencement of work for review and for filing at job site as required.

D. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

B. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

C. Do not install panels that are wet, those that are moisture damaged, and those that are mold

damaged.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers: Subject to compliance with requirements, available manufactures offering products that may incorporated into the Work include the following:
   1. American Gypsum.
   2. CertainTeed Gypsum, Inc.
   3. Georgia-Pacific Gypsum
   4. National Gypsum Co.
   5. Pabco Gypsum, Inc.
   6. USG Corporation.

B. Substitutions: or equal.

C. Requests for substitutions will be considered in accordance with Section 01 60 00.
   1. When submitting request for substitution, provide complete product data and MSDS sheet for each substitute product.

2.2 GYPSUM PRODUCTS, GENERAL

A. Size: Provide maximum lengths and widths available that will minimize joints in each area that correspond with the support system indicated.

B. Recycled Content: Provide gypsum panel products with recycled content such that post consumer recycled content plus one-half of pre-consumer recycled content constitutes a minimum 50 percent by weight.

2.3 INTERIOR GYPSUM MATERIALS

A. Regular Gypsum Board: Gypsum core panel surfaced with paper on front and back edges and complying with ASTM C 1396 and ASTM C 36.
   1. Thickness: 1/2 inch (12.7 mm), unless otherwise indicated.
   2. Width: 48 inches (1219 mm).
   3. Length: Use longest length available, avoiding unnecessary joints.
   4. Edges: Use square, rounded tapered, or tapered per required application.

B. Regular Mold Resistant Gypsum Board: Gypsum core panel enhanced with moisture-resistant wax emulsion and chemically treated to resist mold and mildew in the core and surfaced with mold and mildew resistant paper on front, back and long edges and complying with ASTM C 1396 Section 7 and ASTM C 630.
   1. Thickness: 1/2 inch (12.7 mm), unless otherwise indicated.
   2. Width: 48 inches (1219 mm).
   3. Length: Use longest length available, avoiding unnecessary joints.
   4. Edges: Use square, rounded tapered, or tapered per required application.
   5. Mold and Mildew Resistance: Panel score of 10 when tested in accordance with ASTM D 3273.

2.4 GYPSUM JOINT TREATMENT AND FINISH PRODUCTS

A. Joint Treatment Tape: Complying with ASTM C 475 and GA-216.

B. Joint Compound: Vinyl type pre-mixed compound; complying with ASTM C 475.

C. Joint Compound: Level Five vinyl type pre-mixed compound; off-white color or tinted gray color; complying with ASTM C 475 and fulfilling ASTM C 840; designed for joint finishing of Level Five gypsum board.

2.5 ACCESSORY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.

B. Corner Bead: Formed galvanized steel angle, min. base steel 0.014 in. thick, and complying with ASTM C 1047.

C. Casing Bead: Formed galvanized steel or vinyl trim, matching existing application and complying with ASTM C 1047, type(s) as follows:
1. J-shaped U-bead, for face nailing and finishing with joint treatment.
2. J-shaped U-bead, requiring no finishing.
3. L-shaped, for application over edge and finishing with joint treatment.

D. Control Joint: Extruded vinyl formed with V-shaped slot covered with removable flexible vinyl strip; complying with ASTM C 1047.

E. Control Joint: Bent zinc sheet formed with V-shaped slot, covered with plastic tape, with perforated flanges; complying with ASTM C 1047.

F. Screws: ASTM C 954 or ASTM C 1002 or both with heads, threads, points, and finish as recommended by panel manufacturer.

G. Nails: ASTM C 514 with heads, lengths, configurations, and finish as recommended by panel manufacturer.

H. Acoustical Sealant: Nondrying, nonhardening, nonskinning, nonstaining, nonbleeding, gunnable type as recommended by panel manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

A. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.2 INSTALLATION

A. Application: Apply and maintain conditions during installation in accordance with GA-216 and GA-238 and as follows:
1. Keep gypsum board dry throughout application.
2. Do not use gypsum board that has visible mold growth.
3. Apply gypsum board on walls with a minimum 1/4 inch (6.4 mm) gap between the gypsum board and the floor.

4. Do not apply gypsum board over other building materials where conditions exist that are favorable to mold growth.
5. Maintain a sound weather-tight building envelope including, such elements as the roof, sealants, windows, etc.
6. Immediate and appropriate remediation measures must be taken as soon as water leaks or condensation sources are identified.
7. If gypsum board is damaged by water, assess the need for replacement in accordance with GA-231.

B. Install accordance with GA 216 and the following:
1. Gypsum Sheathing Board: ASTM C 1280 and GA-253.
2. Gypsum Board and Joint Treatment: ASTM C 840 and GA-214.
3. Gypsum panel manufacturer's published recommendations.

C. Finishing: Tape, fill, sand and finish joints in accordance with ASTM C 840 and GA-214.
1. Level 2: Water resistant gypsum backing board indicated to receive tile.
2. Level 4: Gypsum board indicated to receive light textured coatings and light-grade wall coverings.
3. Level 5: All other gypsum board.

END OF SECTION

SECTION 09 90 00

PAINTS AND COATINGS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Interior Paint and Coatings Systems Including Surface Preparation.

B. Exterior Paint and Coatings Systems Including Surface Preparation.

1.2 REFERENCES

A. American National Standards Institute (ANSI/ASSE).

B. ASTM International (ASTM).

C. Master Painters Institute (MPI)

D. Occupational Safety and Health Administration (OSHA).

E. Painting and Decorating Contractors of America (PDCA).

F. The Society for Protective Coatings (SSPC).

G. Underwriters Laboratories (UL).

1.3 SUBMITTALS

A. Product Data: For each paint system indicated, including.
   1. Product characteristics.
   2. Surface preparation instructions and recommendations.
   3. Primer requirements and finish specification.
   4. Storage and handling requirements and recommendations.
   5. Application methods.
   6. Cautions for storage, handling and installation.

B. Submit Material Safety Data Sheets (MSDS) prior to commencement of work for review and for filing at job site as required.

C. Selection Samples: Submit a complete set of color chips that represent the full range of manufacturer's products, colors and sheens available.

D. Coating Maintenance Manual: upon conclusion of the project, the Contractor or paint manufacture/supplier shall furnish a coating maintenance manual. Manual shall include an Area Summary with finish schedule, Area Detail designating where each product/color/finish was used, product data pages, Material Safety Data Sheets, care and cleaning instructions, touch-up procedures, and color samples of each color and finish used.

E. Field Coating of Vinyl Siding Methods and Procedures:

1. Manufacturer Guarantee: Submit letter from Manufacturer with acceptable product and application methods for coatings used on vinyl siding systems.
2. Quality Assurance Plan: Submit methods and procedure plan for protection of adjacent environmental items, equipment, vehicles, adjacent structures, etc.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver manufacturer's unopened containers to the work site. Packaging shall bear the manufacturer's name, label, and the following list of information.
1. Product name, and type (description).
2. Application and use instructions.
3. Surface preparation.
4. VOC content.
5. Environmental handling.
6. Batch date.
7. Color number.

B. Storage: Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

C. Store materials in an area that is within the acceptable temperature range, per manufacturer's instructions. Protect from freezing.

1.5 EXTRA MATERIALS

A. Furnish Owner with any unused materials. Properly seal canisters and label with finish and finish location for proper Owner storage.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers: Subject to compliance with requirements, available manufactures offering products that may incorporated into the Work include the following:
1. BEHR Process Corporation.
2. Benjamin Moore & Co.
3. Dunn-Edwards Corporation.
4. The Sherwin-Williams Company.

B. Substitutions: or equal.

C. Requests for substitutions will be considered in accordance with Section 01 60 00.
1. When submitting request for substitution, provide complete product data and MSDS sheet for each substitute product.

2.2 PAINT MATERIALS - GENERAL

A. Paints and Coatings.
1. Unless otherwise indicated, provide factory-mixed coatings. When required, mix coatings to correct consistency in accordance with manufacturer's instructions before application. Do not reduce, thin, or dilute coatings or add materials to coatings unless

such procedure is specifically described in manufacturer's product instructions.

2. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with final finish coat as base color. Or follow manufactures product instructions for optimal color conformance.

B. Primers: Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.

C. Coating Application Accessories: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required, per manufacturer's specifications.

D. Application to Materials: Apply paints and coatings manufacturer's specifications for application to Wood, Drywall, Plaster, Metals, etc.

E. VOC Content: Provide materials that comply with VOC limits of authorities having jurisdiction.

F. Color: Refer to existing finishes or as selected by Owner.

2.3 INTERIOR PAINT SYSTEMS

A. Interior Painting:
1. Finish: Gloss, Semi-Gloss, Satin or Flat to match existing. If matching is not required, finish per Manufacturer or industry requirements for interior applications.
2. Coats: Apply quantity of coats to match existing. If matching is not required, finish per Manufacturer or industry requirements for interior applications.

B. Interior Primers/Sealers:
1. Interior primers/sealers to be latex or as per Manufacturer/Industry requirements for interior applications.

C. Interior Wood Sealers:
1. Wood primers to be latex or as per Manufacturer/Industry requirements for interior applications.

2.4 EXTERIOR PAINT SYSTEMS

A. Exterior Painting:
1. Finish: Gloss, Semi-Gloss, Satin or flat to match existing. If matching is not required, finish per Manufacturer or industry requirements for exterior applications.
2. Coats: Apply quantity of coats to match existing. If matching is not required, finish per Manufacturer or industry requirements for exterior applications.

B. Exterior Primers/Sealers:
1. Water based primers/sealers to be alkali resistant and/or bonding or as per Manufacturer or industry requirements for exterior applications.

C. Exterior Wood Sealers:
1. Wood primers to be alkyd and/or latex or as per Manufacturer or industry requirements for exterior applications.

D. Vinyl Siding:
   1. Primers and finishes as per manufacturer or industry requirements for vinyl application.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared; notify Architect of unsatisfactory conditions before proceeding. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

B. Proceed with work only after conditions have been corrected and approved by all parties, otherwise application of coatings will be considered as an acceptance of surface conditions.
   1. Previously Painted Surfaces: Verify that existing painted surfaces do not contain lead based paints, notify Architect immediately if lead based paints are encountered.

3.2 SURFACE PREPARATION

A. General: Surfaces shall be dry and in sound condition. Remove oil, dust, dirt, loose rust, peeling paint or other contamination to ensure good adhesion.
   1. Remove mildew before painting by washing with a solution of 1 part liquid household bleach and 3 parts of warm water. Apply the solution and scrub the mildewed area. Allow the solution to remain on the surface for 10 minutes. Rinse thoroughly with clean water and allow the surface to dry a minimum of 48 hours before painting. Wear protective glasses or goggles, waterproof gloves, and protective clothing. Quickly wash off any of the mixture that comes in contact with your skin. Do not add detergents or ammonia to the bleach/water solution.
   2. Remove items including but not limited to thermostats, electrical outlets, switch covers and similar items prior to painting. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
   3. No exterior painting should be done immediately after a rain, during foggy weather, when rain is predicted, or when the temperature is below 50 degrees F (10 degrees C), unless products are designed specifically for these conditions. On large expanses of metal siding, the air, surface and material temperatures must be 50 degrees F (10 degrees F) or higher to use low temperature products.

B. Drywall - Interior: Must be clean and dry. All nail heads must be set and spackled. Joints must be taped and covered with a joint compound. Spackled nail heads and tape joints must be sanded smooth and all dust removed prior to painting.

C. Plaster: Must be allowed to dry thoroughly for at least 30 days before painting, unless the products are designed to be used in high pH environments. Room must be ventilated while drying; in cold, damp weather, rooms must be heated. Damaged areas must be repaired with an appropriate patching material. Bare plaster must be cured and hard. Textured, soft, porous, or powdery plaster should be treated with a solution of 1 pint household vinegar to 1 gallon of water. Repeat until the surface is hard, rinse with clear water and allow to dry.

D. Vinyl Siding, Architectural Plastics, EIFS and Fiberglass: Clean vinyl siding thoroughly by

scrubbing with a warm, soapy water solution. Rinse thoroughly. Do not paint vinyl siding with any color darker than the original color unless approved by Manufacturer.

E. Wood: Must be clean and dry. Prime and paint as soon as possible. Knots and pitch streaks must be scraped, sanded, and spot primed before a full priming coat is applied. Patch all nail holes and imperfections with a wood filler or putty and sand smooth.

3.3 INSTALLATION

A. Apply all coatings and materials with the manufacturer’s specifications in mind. Mix and thin coatings according to manufacturer's recommendations.

B. Apply primer to all materials receiving a finish coat of paint.

C. Do not apply to wet or damp surfaces. Wait at least 30 days before applying to new concrete or masonry. Or follow manufacturer's procedures to apply appropriate coatings prior to 30 days. Test new concrete for moisture content. Wait until wood is fully dry after rain or morning fog or dew.

D. Apply coatings using methods recommended by manufacturer and uniformly apply coatings without runs, drips, or sags, without brush marks, and with consistent sheen.

E. Apply coatings at spreading rate required to achieve the manufacturers recommended dry film thickness. Regardless of number of coats specified, apply as many coats as necessary for complete hide, and uniform appearance.

F. Touch-up damaged coatings after substantial completion, following manufacturer's recommendation for touch up or repair of damaged coatings. Repair any defects that will hinder the performance of the coatings.

G. Comply with the manufacturer's instructions, specified industry standards and recommendations for cleaning, traffic, furnishings installation and equipment installation.

END OF SECTION

SECTION 33 21 13

RADON MITIGATION SYSTEMS

The following work plan outlines the controls required to address elevated radon in air concentrations at 54 Rainbow Road, Bridgeport, Connecticut.

1. The Contractor shall be on the list of Nationally Certified Radon Mitigation Professionals and shall have a designated Competent Person (as defined by OSHA) on the job at all times to ensure proper work practices throughout the project. Contractors shall comply with all OSHA and NIOSH standards including use of the appropriate safety equipment such as hard hats, face shields, ear plugs, steel-toe boots and protective gloves are available on the job site during cutting, drilling, grinding, polishing, demolishing or other activity associated with radon mitigation projects.
2. The Contractor shall provide a work plan outlining proposed measures to reduce radon levels in the residence. The Contractor shall allow for a 5-day review period of the work plan and be prepared to modify the plan based on concerns raised by the owner, or project Engineer (Martinez Couch & Associates, LLC).
3. The Contractor shall review project specifications for asbestos, mold, PCBs, and lead to evaluate if these materials will impact the project, and what appropriate measures are necessary.
4. All components of radon mitigation systems shall be installed in compliance with provisions of the Radon Mitigation Standard, applicable mechanical, electrical, building, plumbing, energy and fire prevention codes, standards, and regulations of the local jurisdiction. The contractor shall obtain all required licenses and permits, and display them in the work areas as required by local ordinances.
5. All electrical equipment used during radon mitigation projects shall be properly grounded. Circuits used as a power source should be protected by Ground-fault Circuit Interrupters (GFCI).
6. Contractors shall provide the following written information in accordance with Section 01 33 00 Submittal Procedures to Martinez Couch & Associates prior to initiation of work:

    a. The contractor's EPA RPP Mitigation Service Provider identification number.
    b. A statement that describes the planned scope of the work and that includes an estimate of the time needed to complete the work.
    c. A statement describing any known hazards associated with chemicals used in or as part of the installation.
    d. A statement indicating compliance with and implementation of all EPA standards and those of other agencies having jurisdiction (e.g., code requirements).
    e. A statement describing any system maintenance that the building owner would be required to perform.
    f. An estimate of the installation cost and annual operating costs of the system.
    g. The conditions of any warranty or guarantee.

7. Containment of dusts generated by the interim measures shall be implemented. Also, removal of generated materials shall be conducted with proper offsite-disposal of the material by the Contractor.
8. One to four weeks following initiation of the system, the residence will be evaluated by the project consultant for radon levels. If levels are identified above 4.0 pCi/L, the system shall be modified to increase radon removal; this iteration of sampling and modifications to the system shall continue until radon levels are below 4 pCi/L.