

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 to:

Lender Residence

155 Shore Road

Clinton, CT 06413

Prepared by:

Capital Studio Architects, LLC.

1379 Main Street, East Hartford, CT 06108

860.289.3262

Project #: 2068

CSA Project # 1347-04

Date: August 19, 2014



Project # 2068

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Section 1

Section 1

ADVERTISEMENT FOR BIDS

Project #2068

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 **Project #2068, Lender Residence, 155 Shore Road, Clinton, CT 06413** will be received by Capital Studio Architects, LLC. located at 1379 Main Street, East Hartford, CT 06108 until **4:00 o’clock PM on Friday, September 12, 2014.**

A Mandatory Walk Through will be held at the Project Site located at **155 Shore Road, Clinton, CT 06413 at 9:30 AM on Thursday, August 28, 2014.**

The Information to Bidders, Form of Bid, Form of Contract, Plans, Specifications, and Performance and Payment Bond 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, and at the office Capital Studio Architects, LLC. located at 1379 Main Street, East Hartford, CT 06108.

Copies of plans may be downloaded directly from the Department of Housing website under bid notices or obtained, when requested in advance, from the office of Capital Studio Architects, LLC. located at 1379 Main Street, East Hartford, CT 06108 upon payment of \$25.00 for each set.

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

Each bidder must deposit with his bid, security in the amount, form and subject to the conditions provided in the Information to Bidders.

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 David Holmes, Project Manager at Capital Studio Architects, LLC. located at 1379 Main Street, East Hartford, CT 06108, until **4:00 o'clock PM on Friday, September 12, 2014.**

The envelopes containing the bids must be sealed, addressed to David Holmes, Project Manager at Capital Studio Architects, LLC. and designated as bid for **Project #2068, Lender Residence, 155 Shore Road, Clinton, CT 06413.**

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 **9:30 AM on Thursday, August 28, 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 properly 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: David Holmes, Project Manager at Capital Studio Architects, LLC. located at 1379 Main Street, East Hartford, CT 06108 and, to be given consideration, must be received at least three 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 two 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, Specifications, Invitation to Bidders, Instructions to Bidders, General Conditions, Bid Form, Form of Contract and Form of Bonds for **Project No. 2068** and Addenda No. _____ and _____ thereto, as prepared by Capital Studio Architects, LLC. East Hartford, Connecticut, and on file in the office of DOH, hereby proposes to furnish all permits, labor, materials, tools, equipment and related items required for the rehabilitation and reconstruction including general construction, site improvements, plumbing, heating, electrical and finish items for said **Project No. 2068 located at 155 Shore Road in Clinton, State of Connecticut**, all in accordance with the Drawings and Specifications, for the sum of:

_____ Dollars (\$ _____).

<i>Section #</i>	<i>Scope of Work</i>	<i>Subcontractor</i>	<i>Labor Cost</i>	<i>Material</i>	<i>Total</i>
TOTAL COST					

ALTERNATE PROPOSALS AND UNIT PRICES

The undersigned bidder further proposes and agrees that should any or all of the following Alternates be accepted and included in the Contract, the amount of the Base Bid, as heretofore stated, shall be adjusted by the amount stated for each Alternate, or Unit Price. All materials and workmanship shall be in strict accordance with the Drawings and Specifications and shall be in-place prices.

<u>Alternates</u>	<u>Unit Price</u>	<u>Unit Measure</u>
No. <u>1</u> _____	\$ _____	No. <u>1</u> _____ \$/ f
No. <u>2</u> _____	\$ _____	No. <u>2</u> _____ \$/ f
No. <u>3</u> _____	\$ _____	No. _____ \$/ f
No. <u>4</u> _____	\$ _____	No. _____ \$/ f
No. <u>5</u> _____	\$ _____	No. _____ \$/ f
No. _____	\$ _____	No. _____ \$/ f
No. _____	\$ _____	No. _____ \$/ f
No. _____	\$ _____	No. _____ \$/ f
No. _____	\$ _____	No. _____ \$/ f

Refer to Specification Section 01230 and 01270 for description of Alternate and Unit Pricing. Provide Pricing in the spaces provided above.

Refer to Specification Section 02090 for abatement Unit Pricing and Alternate Pricing. Provide Pricing in the spaces provided above.

The undersigned agrees to commence the work on a date to be specified in the contract and to complete such work within **120** consecutive calendar days.

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 Small/Minority Business Enterprises that will perform work and/or provide materials, equipment or services as part of the contract.

In submitting this bid, it is understood that the right is reserved by the abovementioned DOH to reject any and all bids; and it is agreed that this bid may not be withdrawn for a period of thirty (30) days from the date of bid opening or until the next work day immediately following said period if such period ends on a weekend or a State holiday.

Attached hereto is an affidavit, in proof that the undersigned has not entered into any collusion with any person in respect to this proposal, or any other proposal, or the submitting of proposals for the above Project. Also attached is a statement of contractor's qualifications, Certification of Bidder Regarding Equal Employment Opportunity, and Segregated Facilities.

Acknowledgement of Bidder

I, THE UNDERSIGNED AS AN AUTHORIZED OFFICER OF:

(Company Name)

(Date)

(Address)

(Telephone)

(City/State/Zip)

(Fax No.)

(FEIN)

I HEREBY SUBMIT THE FOLLOWING PRICES FOR THE PROJECT IDENTIFIED ABOVE: (Indicate in words and numerals)

BASE BID PRICE: Cost _____

AMOUNT IN WORDS: _____

(Signature)

(Date)

(Printed Name)

(Title/Position)

(Email address) _____

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

SUBCONTRACTOR IDENTIFICATION

(Provide additional forms for more subcontractors, as needed.)

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.

N/A

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 \geq 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.
- N/A** **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.
- N/A** **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.

N/A

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

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 3

SECTION 00900
SPECIAL CONDITIONS

1. SPECIAL CONDITIONS DEFINITIONS

A. Where the Specifications refer to Owner, or the DOH this shall be construed to mean the Connecticut Department of Housing, 505 Hudson Street, Hartford, CT 06106. Its designated agent shall be referred to as the "Contracting Officer" in these specifications.

2. BIDDING REQUIREMENTS

A. Contractor shall contact the DOH regarding site visit questions. Contact should be by the telephone to:

Ms. Lillian Ruiz, Grants and Contracts Specialist
CDBG-Disaster Recovery Program
Connecticut Department of Housing
505 Hudson Street
Hartford, CT 06106
(860) 270-8027

B. Architectural questions on specifications and drawings are to be addressed to:

Mr. David Holmes, or Mr. Jason Pitts
Capital Studio Architects, LLC
1379 Main Street
East Hartford, CT 06108
Tel: (860) 289-3262
Fax: (860) 289-3163
Email: dholmes@capitalstudio.net, or jpitts@capitalstudio.net

3. SALES TAX

A. The DOH is NOT exempt from Connecticut Sales Tax. Other fees assessed by the State of Connecticut may be passed through to the contractor.

4. INSURANCE

A. No insurance shall be terminated by the Contractor without ten (10) days notice to the DOH.

B. All insurance companies shall be licensed and registered in the State of Connecticut.

5. INTERPRETATIONS OF DRAWINGS

A. Any questions or disagreements arising as to the true intent of this specification or the drawings, or the kind and quality of work required thereby, shall be decided by the Architect, whose interpretations thereof shall be final, conclusive, and binding on all parties.

B. In the case of disagreement between drawings and specifications, or within either document itself, the better quality, greater quantity, or more costly work shall be included in the contract price, and the matter referred to the Architect's attention for decision and/or adjustment.

C. If the disagreement between the drawings and specification cannot be resolved through

either A. or B. above, the specifications shall take precedence over the drawings.

6. VISITING THE SITE

A. Before submitting his final proposal, the Contractor shall examine the site of the proposed work to determine the existing conditions that may affect his work, as he will be held responsible for any assumptions made by him in regard thereto.

7. CONTRACTOR'S PROPOSAL

A. The Contractor's proposal and bid must cover all items on the drawings and in the specifications exactly as drawn and specified.

B. Proposals and bids that do not conform to drawings and specifications will not be accepted.

8. SUBSTITUTIONS

A. Substitutions of equipment or materials other than those indicated on the drawings or in the specifications, shall be limited to those approved in advance, in writing, by the Architect.

9. SUB-CONTRACTORS

A. All sub-contractors shall be subject to approval of the DOH and listed on the Form of Bid.

B. When requested by the DOH, the prospective contractors should submit a list with names, addresses, and telephone numbers of similar type projects previously completed.

10. LAWS, ORDINANCES, PERMITS AND FEES

A. The Contractor shall give all necessary notices, obtain all permits and pay for governmental taxes, fees, and other costs in connection with his work; file all necessary plans, prepare all documents and obtain all necessary plans, prepare all documents and obtain all necessary approvals of the Governmental departments having jurisdiction; obtain all required Certificates of Inspection for his work and deliver to the Architect before request for acceptance and final payment for the work. The DOH is not exempt from paying Building Permit Fees to the City of New Haven. The Contractor shall include for any and all State of Connecticut Department of Environmental Protection Permits in addition to all Local Permits.

11. APPROVALS

A. The materials, workmanship, design and arrangement of all work installed under the contract shall be subject to the approval of the Architect. If material or equipment is installed before it is approved, the contractor shall be liable for the removal and replacement, at no extra charge to the owner, if, in the opinion of the Architect, the material or equipment does not meet the intent of the drawings and specifications.

B. The words "approved equal" shall be understood to apply only to those items of equipment and material approved in advance by the Architect.

C. Equipment and materials that do not conform to the specifications or the previous paragraph will not be approved.

12. NON-SEGREGATED FACILITIES

A. By signing the bid, the bidder certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, or under his control, where segregated facilities are maintained. He certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The bidder agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this Contract. As used in this certification, the term "segregated facilities" mean any waiting room, work areas, restrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin, because of habit, local custom or otherwise. He further agrees that (except where he has obtained identical certification from proposed sub-contractors for specific time periods) he will obtain identical certification from proposed sub-contractors prior to the award of sub-contracts exceeding \$10,000.00, which are not exempt from the provisions of the Equal Opportunity Clause; that he will retain such certifications in his files; that he will forward a notice to his proposed sub-contractors as provided in the Instruction to Bidders

13. JOB MEETINGS

- A. The contractor and others concerned with the project whose presence is necessary as determined by the DOH and/or the Architect shall attend job meetings when requested for the purpose of discussing and expediting the prosecution of the work.
- B. The schedule for meetings will be established by the DOH and/or the Architect.
- C. The proceedings of these meetings will be recorded by the DOH and/or the Architect; the contractor will be furnished a copy for his use and distribution as required.

14. DRAWINGS

A. Drawings are generally schematic and may differ to some degree from field conditions. Specifically, certain drawings may be opposite hand from actual conditions and/or requirements. All dimensions are \pm . The contractor shall ascertain for himself the actual field conditions and shall be fully responsible for the indicated, specified and required work as designated and/or implied.

15. SCHEDULE OF THE WORK

- A. The project area is tenant occupied. All work shall be carried out in such a manner so as to cause minimal interference with the use of the project by the tenant.
- B. Other work in progress concurrently with work under this contract shall be affected by the performance of this contract. Conformance with this provision shall be the responsibility of this contractor.
- C. The standard working hours shall be from 8:00 a.m., until 4:30 p.m., Monday through Friday. The Contractor shall confirm working hours with the Owner prior to starting the work. Holidays shall include those observed by the DOH and the State of Connecticut.

D. The contractor shall at all times, maintain the fire integrity of the structures and shall maintain, free and clear all exitways.

E. The Contractor is required to submit to the Architect, for approval, prior to commencement of the work, a Project Schedule which identifies the time frame and sequence of construction. The Contractor is to provide an updated Project Schedule with each Application for Payment.

F. The Contractor must provide the DOH 48 hours' notice prior to the start of work so the owner may provide notice to the tenants.

16. MATERIALS AND EQUIPMENT

A. New materials and equipment installed into existing work shall be compatible with the existing work.

B. The contractor shall advise the Architect before ordering and/or installing any materials and equipment if he disputes those items and/or methods specified, otherwise he shall take full responsibility for their performance and suitability.

17. STORAGE OF MATERIALS

A. Storage space for materials and equipment is limited, Property Owner must approve in advance the locations of stored materials and/or dumpster(s).

B. Equipment and materials stored on the project site is the full responsibility of the contractor.

18. TEMPORARY FACILITIES

A. The contractor shall provide and maintain an adequate office at the project site at his discretion. If provided, it shall be located as directed by the DOH. It shall be kept clean, have adequate light and ventilation.

B. The contractor shall provide and maintain telephone service for his own use. No telephone service is available at the sites.

19. TEMPORARY SERVICE

A. The Contractor may connect to water available at the project without payment to the Owner.

B. The Contractor may connect to the existing electrical service without payment to the Owner.

C. Fixtures, or other modifications, shall be the responsibility of the contractor.

20. SANITARY FACILITIES

A. Sanitary facilities are not available at the project site. The Contractor shall provide temporary facilities at the site for his workers, at his own expense. Coordinate final locations with the DOH project representative.

21. DEMOLITION

A. This work includes the furnishing of all labor, materials, equipment and services necessary for, and reasonable incidental to, completion of all Demolition, as required for the installation of

the work, whether or not listed below.

B. The Contractor shall be confirm with Property Owner if a dumpster shall be permitted to remain on site for the purpose of disposal of demolished materials and debris. Final location of the dumpster to be coordinated with the Property Owner.

22. SALVABLE MATERIALS

A. NO SALVABLE MATERIALS.

23. SHOP DRAWINGS AND SUBMITTALS

A. Prior to delivery of materials and equipment to the project site, submit five (5) copies of Shop Drawings or Submittals of each item for approval by the Architect.

B. Submittals shall consist of manufacturer's scale drawings, cuts or catalogs, including descriptive literature and complete characteristics of equipment showing dimensions, capacity, code compliance, motor and drive and testing, all as required for this project.

C. Architect may designate submittal of physical samples for approval on items where actual color, texture or other characteristics might not be adequately described by drawing or written material.

24. PROTECTION OF WORK AND PROPERTY

A. The contractor shall be responsible for the maintenance and protection of all equipment, materials and tools, supplied by him and stored or installed on the job site, from loss or damage of all causes, until final acceptance by the DOH.

B. The contractor shall be responsible for the protection of any finished work of other trades or existing buildings and tenant's property and damage or defacement by his operation and must remedy any such injury at his own expense.

C. It shall be the Contractor's responsibility to protect all parts of the existing site, all trees, roads, streets, sidewalks, driveways, plantings, landscaping, lawns and curbs against damage caused by trucks, etc., driving over them. If they are damaged, the Contractor without cost to the Owner shall replace them.

D. The building is owner occupied. The Contractor shall take the necessary precautions to protect work areas and debris from potential dangers. Clear paths of egress must be maintained from the building at all times.

25. ACCESSIBILITY

A. The Contractor shall install all work so that all parts required and readily accessible for inspection, operation, maintenance and repair. Minor deviations from the drawings may be made to accomplish this, but changes of magnitude shall not be made without prior written approval from the Architect.

26. SCAFFOLDING, RIGGING, HOISTING

A. The Contractor shall provide all scaffolding, rigging, hoisting and services necessary for erection and delivery into the premises for all equipment and materials furnished, and remove same from premises when no longer required.

B. The Contractor shall coordinate in advance with the Owner the methods and locations for lifting of materials to the roof. The Contractor cannot assume that any existing site fixture can be temporarily removed or relocated during this construction process, this can only be discussed with the Owner after bids have been awarded.

27. GUARANTEE PERIOD

A. Refer to specific Sections of this project manual for warranty and guarantee periods.

28. FINAL PAYMENT REQUIREMENTS

A. Final Payment will not be approved until all items as outlined in Section 01700 have been completed.

B. All guarantees and warranties for new materials shall commence at date of written Final Acceptance of the Work, by the DOH, or its designated agent.

C. Upon completion of the project, the roofing manufacturer shall provide installation and material inspection warranties and certification of the roof system.

29. CLEAN UP

A. Project shall be cleaned daily or as required to keep project area free from rubbish and debris. Burning of rubbish shall not be allowed. All debris shall be removed from the site and deposited legally off-site.

B. Final clean up shall include all debris, stains, and other defacement caused by the work.

30. LIQUIDATED DAMAGES

A. In case of failure on the part of the contractor to complete the work within the time fixed in the Contract, or any extension thereof, the Contractor shall pay to the DOH as fixed, agreed and liquidated damages the sum of \$250.00 for each calendar day of delay.

31. HAZARDOUS MATERIALS

A. A hazardous material report has been completed by Eagle Environmental; this report is available within these Specifications, please refer to this report for handling, removal and disposal of all hazardous materials. It is the intention that this project's Scope of Work be completed in coordination with any hazardous materials encountered and be done within the quantities allowed, as specified by state and local authorities regulating abatement of these materials. If the Contractor suspects that certain building materials may contain hazardous materials, he shall notify the Architect in writing and the Architect will have the suspect materials tested.

32. CHANGE ORDERS

A. For all change orders, the general contractor shall be allowed 10% for overhead, above the direct costs and 5% for profit, above the direct costs to be calculated at 15% total above direct costs, for work performed by the general contractor.

B. For all change orders, the sub-contractors shall be allowed 10% for overhead, above the

direct costs and 5% for profit, above the direct costs to be calculated at 15% total above direct costs, for work performed by the sub-contractor.

- C. For all change orders, the general contractor shall be allowed 5% for overhead, above the direct costs and 2-1/2% for profit, above the direct costs to be calculated at 7-1/2% total above direct costs, for work performed by the sub-contractor.

33. BUILDER'S RISK INSURANCE

- A. Item 36B of HUD General Conditions, Form 5370-A refers to Builder's Risk Insurance. It has been determined that the Builder's Risk Insurance is not required on this project.

34. OSHA REGULATIONS

- A. The contractor shall comply with all applicable State and Federal OSHA regulations.
- B. The contractor shall submit to the owner, a copy of the OSHA ten (10) hour construction safety and health card for each employee.
- C. The contractor shall maintain any and all required OSHA materials, on site, at all times.

35. CONTRACT PERIOD

- A. The Contract period will be One Hundred and Twenty (120) consecutive calendar days from day of "Notice to Proceed" until day of "Substantial Completion".

36. GENERAL CONDITIONS

- A. In the event a conflict between the Special Conditions and the General Conditions located in Section 2 of these Specifications occurs, the General Conditions shall take precedence.

END OF SECTION 00900

SECTION 01200
SUMMARY OF THE WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General and Special Conditions, and Division 1 Specification sections, apply to work specified in this section.

1.2 SUMMARY OF THE WORK

- A. The scope of this contract, Community Development Block Grant Disaster Recovery for the Owner Occupied Recovery and Rehabilitation Program for the Connecticut Department of Housing, **Project No. 2068 located at 155 Shore Road, Clinton, CT 06413.**
- B. Verbal Summary of the Work: Without force and effect on the requirements of the Contract Documents, the Base Bid work includes, but is not limited to the following:
1. Selective demolition.
 2. Installation of new fiberglass based asphalt roof shingle system including ice and water shield, underlayment, flashings, trim and accessories at new porch roof.
 3. Installation of new stainless steel tube railing system with cables.
 4. New hurricane shutters.
 5. New windows with impact resistant glass.
 6. New wood stairs, railings and handrails.
 7. Priming and painting.
 8. Gypsum wall board repairs.
 9. Lead Based Paint Remediation.
- C. Refer to Section 02090 for Scope of Work, quantities and products required to accommodate the remediation of Lead Based Paint.

1.3 EXISTING CONDITIONS

- A. This project includes work which is affected by existing conditions. Existing conditions which may affect the Work may be discovered during the progress of the Work. Make adjustments in the work as required accommodating existing conditions. Where products are to be installed in existing construction, perform cutting, removal of old products (if applicable), installation of new products, rebuilding of adjacent construction, and other operations as required.
1. The Architect will issue prompt instructions when unanticipated conditions are encountered.
 2. If unanticipated conditions are such as to impose a hardship on the Contractor as interpreted by the Architect, such as faulty structure which must be rebuilt, the Architect shall issue the appropriate change orders for approval by the DOH.
 3. Make adjustments in the Work, other than those described in two above, without additional compensation.

- B. The Drawings do not attempt to show every item of existing work to be demolished and every item of repair required to existing surfaces. Perform work required to remove existing materials which are not to be saved and to restore existing surfaces to like-new condition.
1. If possible, repairs shall be indistinguishable from adjacent sound surfaces. Where it is impossible to achieve repairs which are indistinguishable from adjacent sound surfaces, notify the Architect, and proceed according to the Architect's instructions.

1.4 - USE OF PREMISES

- A. The following are in addition to requirements of the General and Special Conditions governing the Contractor's use of the premises.
1. Assume full responsibility for protection and storage of products stored on the premises.
 2. The Contractor shall have use of the premises between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday. It is during these hours that all work must take place. Additional hours must be approved in advance by the Owner.
 3. The Contractor shall not have use of the premises on holidays which the DOH is closed.
 4. The Contractor will have access to specific project site in accordance with the approved project schedule.
 5. Work on the building will not be allowed without providing the tenant 48 hour prior notice.

1.5 - REFERENCE STANDARDS

- A. Unless date is listed, reference to standard specifications shall mean latest edition of such specification legally adopted and published at the date the Contract is executed.
- B. Reference to technical society or organization is made in the project manual according to the following abbreviations:

A.A.M.A.	American Architectural Manufacturers Association
A.C.I.	American Concrete Institute
A.I.A.	American Institute of Architects
A.I.E.E.	American Institute of Electrical Engineers
A.I.S.C.	American Institute of Steel Construction A.I.T.C. American Institute of Timber Construction
A.F.P.A.	American Forest & Paper Association
A.N.S.I.	American National Standards Institute
A.P.A.	American Plywood Association
A.R.M.A.	Ashphalt Roofing Manufacturer's Association
A.S.H.R.A.E.	American Society of Heating, Refrigeration, and Air Conditioning Engineers
A.S.M.E.	American Society of Mechanical Engineers
A.S.T.M.	American Society of Testing Materials
A.W.I.	American Woodwork Institute
A.W.P.I.	American Wood Preservers Institute
A.W.S.	American Welding Society

A.W.W.A.	American Water Works Association	
B.O.C.A.	Building Officials and Code Administrators International	
C.H.F.A.	Connecticut Housing Finance Authority	
C.P.S.C.	Consumer Products Safety Commission	
C.S.I.	Construction Specification Institute	
D.O.H.	Department of Housing	
E.E.I.	Edison Electric Institute	
Form 812	Connecticut State Department of Transportation Standard Specifications for Roads, Bridges, and Incidental Construction	
F.M.	Factory Mutual	
F.S.	Federal Specification	
H.U.D.	U.S. Department of Housing and Urban	Development
I.E.S.	Illuminating Engineers Society	
I.S.D.S.I.	Insulated Steel Door Systems Institute	
N.A.A.M.M.	National Association of Architectural Metal	Manufacturers
N.B.F.U.	National Board of Fire Underwriters	
N.B.S.	National Bureau of Standards	
N.E.C.	National Electric Code	
N.E.M.A.	National Electrical Manufacturers Association	
N.F.P.A.	National Fire Protection Association	
O.S.H.A.	Occupational Safety and Health Administration	
S.D.I.	Steel Deck Institute	
S.I.G.M.A.	Sealed Insulating Glass Manufacturer's	Association
S.J.I.	Steel Joist Institute	
S.M.A.C.N.A.	Sheetmetal and Air Conditioning Contractors National Association, Inc.	
S.S.P.C.	Steel Structures Painting Council	
U.L.	Underwriters Laboratories, Inc.	
W.W.P.A.	Western Wood Products Association	

1.6 – FINAL PAYMENT REQUIREMENTS

- A. Final Payment will not be approved until all items as outlined in Section 01700 have been completed.
- B. All guarantees and warranties for new materials shall commence at date of written Final Acceptance of the Work, by the DOH, or its designated agent.
- C. Upon completion of the project, the roofing manufacturer shall provide installation and material inspection warranties and certification of the roof system.

1.7 - GENERAL INFORMATION

- A. The DOH is a governmental agency, but is responsible for paying sales tax. The Contractor shall assume that materials purchased for the use on this project shall be taxed.

1.8 - SCHEDULE

- A. Refer to Form of Contract for completion date.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION 01200

SECTION 01230
ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for alternates.

1.2 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
1. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.
 2. Unless otherwise noted, alternate prices will be adds to the base contract.

1.3 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A Schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Refer to Drawing A-4, for **Alternate No. 1.**

1. Provide new pressure treated wood railing system in lieu of cable railing system as show in detail 4/A-4.

B. Refer to Drawings A-2 through A-5 for **Alternate No. 2.**

1. At window locations where the installation of Hurricane Shutters cannot be installed due to existing size constraints, provide Anderson 400 Series Casement windows with high impact, low-e, insulated glazing meeting 2009 International Residential Code requirements. Contractor shall be responsible for verifying window dimensions. Submit proposed window product data and shop drawings to Architect for review.

C. Refer to Drawings A-1 through A-3 and A-6 for **Alternate No. 3.**

1. Extend new roof above existing deck, +/- 5'-0" north, including roof framing, sheathing, shingles, metal flashings and trims. Coordinate termination with roof of existing main house above Office on the second floor. Provide new concrete footing, pier and 6x6 pressure treated post and all stainless steel fasteners and connectors. Alternate section shall match Base Bid section, including structural support components.

D. Refer to Drawings A-2 and A-6 for **Alternate No. 4.**

1. Provide temporary cable bracing system, including 2x6 blocking, fasteners, lag eye screws and 2,000 lb test wire rope cable with turnbuckle and eye slip hook at each end, typical at (3) three locations in attic.

E. Refer to Drawing A-6 for **Alternate No. 5.**

1. Provide 16 gauge, 3" stainless steel straps at each roof rafter underneath existing sheathing. Remove roof shingles, including ridge vent (if existing) and expose the existing sheathing. Remove roof sheathing as required to install stainless steel straps at each rafter. Patch roof sheathing to match existing.

END OF SECTION 01230

SECTION 01270

UNIT PRICES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for Unit Prices.
- B. Refer to other specification sections for specific requirements for this work.
- C. Enter Unit Price amounts on the enclosed Bid Form.

1.2 DEFINITIONS

- A. Unit price is an amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

1.3 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A list of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

- A. Refer to drawings for details and locations for Unit Price work.

3.1 LIST OF UNIT PRICES

A. Unit Price No. 1 – Red Cedar Wood Siding / Shakes

1. Condition – Remove existing wood cedar shakes where new work is required.
2. Description – Install new red cedar wood shakes / siding:
3. Unit of measure – Per square foot.

B. Unit Price No. 2 – 1/2" Gypsum Wall Board

1. Condition – In the Living / Dining Room area where the existing interior GWB is damaged or deteriorated, patch and repair as required to match existing adjacent surfaces. Prime and Paint as required.
2. Unit of measure – Per square foot.

END OF SECTION 01270

SECTION 01300
DEMOLITION

PART 1 - GENERAL

1.1 - RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special Conditions, and Division 1 Specification sections, apply to work specified in this section.

1.2 - GENERAL REQUIREMENTS

- A. "Demolition" denotes razing and removal of materials or portions of existing structures, installations and obstructions shown on Drawings or specified to be removed from the site, and includes taking possession of and removing from the site, all material, equipment and debris resulting from demolition work except as otherwise specified herein. Burning of materials on the site will not be permitted.
- B. Upon completion remove all tools, equipment, temporary structures (if any) and installations and rubbish of every sort. Leave site in a level and orderly condition and the surrounding area in a broom-clean condition.
- C. It is the responsibility of the Contractor to coordinate any demolition work with any general construction work and the work of other trades. The demolition work must be phased accordingly.
- D. Provide any temporary weather protection which may be required as a result of demolition work.

1.3 - EXISTING PUBLIC SPACES

- A. Protect existing services indicated to remain on the site. Replace and/or repair services damaged as a result of demolition work, at no expense to the Owner.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.1 - SCOPE

- A. Portions of structures, installations and obstructions to be demolished are as shown on the Contract Drawings and, in general but not necessarily limited to, those items as listed below:
1. Remove existing temporary wood stairs.
 2. Remove damaged interior gypsum wall board.
 3. Remove bracing and shoring of existing porch / deck.
 4. Remove existing wood siding.
- B. Demolition work shall not be limited to the above listing. The removal, relocation, or replacement of any item(s) by a trade as may be required (1) to complete the indicated scope of work or (2) to accomplish the intended result may require demolition work not specifically listed or shown on the Drawings. All such requirements shall be considered part of this work.

3.2 - PROTECTION

A. It shall be the Contractor's responsibility to protect all parts of the existing site, all trees, roads, streets, sidewalks, driveways, plantings, landscaping, lawns and curbs against damage caused by trucks, etc., driving over them. If they are damaged, the Contractor without cost to the Owner shall replace them.

B. Do not close or obstruct means of egress in connection with the work. Materials and debris shall not be placed or stored in egress paths. Conduct operations so as to interfere as little as possible with normal activities.

END OF SECTION 01300

SECTION 01400
SUBMITTALS

PART 1 - GENERAL

1.1 - RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special Conditions, and Division 1 Specification sections, apply to work specified in this section.

1.2 - RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Substitutions and product options are indicated in Section 00900 of the Special Conditions.
- B. Materials and methods requiring submittals are listed, where applicable, within each respective section of this specification.

1.3 IDENTIFICATION

- A. Identify each submittal with the following information:
1. Date and revision date(s).
 2. Project title.
 3. The names of: Architect, Contractor, subcontractor supplier, manufacturer or separate detailer when pertinent.
 4. Identification of products, materials and finishes.
 5. Relation to adjacent structure or material.
 6. Field dimensions, clearly identified as such.
 7. The specification section number, and applicable standards, such as ASTM or FS number.
 8. Quantities.
 9. Blank spaces, 4" x 4 1/2" each, for the Architect's stamp, and Consultant's stamp where applicable.
 10. Identification of deviations from Contract Documents.
 11. Contractor's stamp, initials or signed, certifying to review of submittal, the verification of the field measurements and quantities, and compliance with Contract Documents.
- B. Accompany the submittals with a transmittal letter containing:
1. Date.
 2. Project Title and H.U.D. number (where applicable).
 3. Contractor's name and address.
 4. The number and name of each item submitted.
 5. Notification of deviations from Contract Documents.

1.4 - SHOP DRAWINGS

- A. Provide the following information, where applicable, on all shop drawings:
1. All necessary dimensions. Dimension work illustrated by shop drawings to fit actual field conditions.
 2. Sufficient detailing to show appearance, method of assembly or fabrication, and the

- method of installation or erection.
3. Identification of details by reference to sheet and detail number shown on Contract Drawings.

1.5 - PRODUCT DATA

- A. Manufacturer's standard schematic drawings which are:
 1. Modified to delete any information which is not applicable to the Project.
 2. Supplemented to provide any additional information applicable to Project.
- B. Manufacturer's catalog sheets, brochures, diagrams schedules, performance charts, illustrations and other standard descriptive data.
 1. Clearly mark each copy to identify the pertinent materials, products, or models.
 2. Show dimensions and clearances required.
 3. Show performance characteristics and capacities.
 4. Show wiring diagrams and controls.
- C. Test reports performed by independent testing agencies for manufacturer. On test reports list:
 1. System, material or work tested.
 2. Test results and witnesses.
 3. Description of correction of faults.

1.6 - SAMPLES

- A. Samples shall be of sufficient size and quantity to clearly illustrate:
 1. Functional characteristics of product or material, with integrally related parts and attachment devices.
 2. Full range of color samples.
 3. After the review, approved samples may be used in construction of Project, where appropriate.

1.7 - SUBMISSION REQUIREMENTS

- A. Submit to the Architect all shop drawings, product data and samples required by the specification sections.
- B. Schedule submissions at least 10 working days before dates reviewed submittals will be needed.
- C. Submit six (6) bond copy prints of each shop drawing.
- D. Submit six (6) copies each of all product data.
- E. Submit two each of required samples unless a greater number is specified or requested by the Architect.
- F. Submit samples with delivery charges prepaid. Samples delivered in damaged condition may not be acceptable, and may have to be resubmitted, to Architect's discretion.

G. The Architect may, at his discretion, request submittals in addition to those specified.

1.8 - RESUBMISSION REQUIREMENTS

A. Shop Drawings:

1. Revise the initial drawings as required by General Conditions, and resubmit as specified for initial submission.
2. Indicate on drawings any changes which have been made other than those requested by Architect.

B. Product data and Samples: Submit new data and samples as required for initial submission.

1.9 - ARCHITECT'S DUTIES

A. Architect's responsibilities for processing submittals are defined in General Conditions.

B. Architect is not responsible for verifying quantities, dimensions, field measurements, or coordination of work of different trades. Architect's review of submittals shall not be construed to include or imply any such verification.

1.10 - CONTRACTOR'S DUTIES

A. In addition to requirements of the General Conditions,

1. Contractor shall be responsible for obtaining and distributing prints of shop drawings after, as well as before final approval, to all parties, including, but not limited to the Housing Authority, H.U.D. (where applicable), subcontractors and suppliers.
2. Prints of approved shop drawings shall be made from sepia transparencies which carry the Architect's and Consultant's stamp of approval.
3. Begin no work which requires shop drawings and product data unless the approved and stamp shop drawings and product data are on file at the job site.

B. The Contractor shall submit one (1) Submittal Package, which shall include all items required to complete any type, which shall be the basis of all units completed for the contract period, subject to any design changes which may result out of execution of the work.

END OF SECTION 01400

SECTION 01500
CUTTING AND PATCHING

Part 1 - GENERAL

1.1 - RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Special Conditions, and Division 1 Specification sections, apply to work specified in this section.

1.2 - DESCRIPTION

A. Definition: "Cutting and Patching" is hereby defined to include, but not necessarily limited to the cutting and patching of nominally completed and previously existing work, in order to accommodate the coordination of work, or the installation of other work, or to uncover other work for access or inspection, or to obtain samples for testing, or for similar purposes; and is defined to exclude integral cutting and patching during manufacturing, fabricating, erecting and installing process for individual units of work.

B. Demolition is recognized as an example of a related, but separate category of work, which may or may not also require cutting and patching as defined in this Section. Refer to Section 01300.

1.3 - QUALITY ASSURANCE

A. Requirements for Structural Work:

1. General: Do not cut and patch structural work in a manner resulting in a reduction of bearing capacity or load/deflection ratio.

2. Call for a structural inspection, and/or obtain the Architect's approval prior to cutting and patching any of the following:

- a. Bearing Walls.
- b. Structural decking and roof or floor systems.
- c. Exterior wall construction.
- d. Pressurized piping, vessels and equipment.

B. Visual requirements: Do not cut and patch work which is exposed on the exterior or exposed in occupied spaces of the building in a manner resulting in a reduction of visual qualities or resulting in substantial evidence of cutting and patching work, both as judged solely by the Architect. Remove and replace work judged by the Architect as having been cut and patched in a visually unsatisfactory manner.

1.4 - SUBMITTALS

A. Requests for Architect's Consent:

1. Prior to cutting and patching of structural elements, submit written request to the Architect for permission to proceed with cutting.
2. Should conditions of the Work, or schedule indicate a required change of materials or methods for cutting and patching, so notify the Architect and secure his written permission and the required Change Order prior to proceeding.
3. Cutting and patching of deteriorated materials listed in the Bid Form as Unit Prices, may proceed without the Architect's prior approval, however, the Contractor shall document the quantity, location and date of materials replaced. The Contractor shall be compensated for this additional work based on the unit price established and the quantities replaced pursuant to Change Orders, and in accordance with Item 2.2 of this Section.

B. Notices to the Architect:

1. Prior to cutting and patching performed pursuant to the Architect's instructions, submit cost estimate to the Architect. Secure the Architect's approval of cost estimates and type of reimbursement before proceeding with cutting and patching.
2. Submit written notice to the Architect designating the time the work will be uncovered, to provide for the Architect's observation.

C. Approval by the Architect to proceed with proposed cutting and patching does not waive the right to later require complete removal and replacement of work found to be cut and patched in an unsatisfactory manner.

Part 2 - PRODUCTS

2.1 - MATERIALS

A. For replacement of items removed, use identical materials to those being removed, or materials complying with the various Sections of these Specifications, as appropriate. The end result of the cutting and patching operation shall result in equal or better work than the work being cut and patched, in terms of performance characteristics and including visual effects where applicable.

2.2 - PAYMENT FOR COSTS

A. Perform cutting and patching needed to comply with the Contract Documents at no additional cost to the Owner. The Owner will reimburse the Contractor for cutting and patching performed pursuant to written Change Orders, after claim for such reimbursement is submitted by the Contractor, and approved in advance by the Architect.

PART 3 - EXECUTION

3.1 - INSPECTION

A. Inspection:

1. Inspect existing conditions, including elements subject to movement or damage during cutting and patching.

2. After uncovering the work, inspect conditions affecting installation of new work.

B. Discrepancies:

1. If uncovered conditions are not as anticipated, immediately notify the Architect and secure needed directions.

2. Do not proceed until unsatisfactory conditions are corrected.

3.2 - PREPARATION

A. Provide adequate temporary support including, but not necessarily limited to shoring and bracing to maintain structural integrity of the Work. Do not endanger other work.

B. Provide adequate protection of other work during cutting and patching, to prevent damage. Provide protection of the Work from adverse weather exposure.

3.3 CUTTING AND PATCHING

A. Perform cutting and patching as required under pertinent other Sections of these Specifications.

B. Employ skilled tradesmen to perform all cutting and patching. Proceed with cutting and patching at the earliest feasible time, in each instance, and perform the work promptly.

C. Patch with seams which are durable and as invisible as possible. Perform fitting and adjusting of products to provide finished installation complying with the specified tolerances and finishes.

D. Select systems that adequately resist racking and provide acceptable deflection under live and dead loads. Reinforce to prevent cracking. Inspect and test patched areas to demonstrate integrity of work.

E. In all cases of repair and renovation, restore exposed finishes of patched areas and where necessary, extend finished restoration onto retained work adjoining, in a manner which eliminates evidence of patching.

END OF SECTION 01500

SECTION 01700
PROJECT CLOSEOUT

PART 1 - GENERAL

1.1 - RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special Conditions, and Division 1 Specification sections, apply to work specified in this section.

1.2 - GENERAL

- A. The following requirements supplement those of the General Conditions.

1.3 - CLEANING

- A. Hazard Control:
1. Store all volatile wastes in covered non-flammable containers.
 2. Prevent accumulation of wastes, which create hazardous conditions.
 3. Provide adequate ventilation during use of volatile or noxious substances.
- B. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
1. Do not burn or bury any rubbish and waste materials on project site.
 2. Do not dispose of volatile wastes such as mineral spirits, oil or paint thinner in the storm or sanitary drains. Dispose of legally off the site.
 3. Do not dispose of wastes in streams or waterways.
 4. Dispose of demolition and waste materials, debris and rubbish legally off the site.
- C. During construction, in addition to cleaning required by the General Conditions, perform the following:
1. Keep building, grounds, and public properties free from accumulations of waste materials and rubbish.
 2. Provide on-site containers for the collection of all waste materials, all debris and rubbish. Dispose of waste materials, debris and rubbish at reasonable intervals, legally off the site.
- D. At completion, for the purposes of final acceptance, in addition to leaving the work clean as required by General Conditions, perform the following:
1. Clean site and clean up any debris or dirt off site, which resulted from work under this contract, and dispose of legally off the site.
 2. When workmen call back for "punch list" or guarantee work, clean up afterwards.

1.4 – PREREQUISITES TO SUBSTANTIAL COMPLETION

- A. General: Prior to requesting Certification Inspection for Substantial Completion, (for either entire work or portions thereof), complete the following and list know exceptions in the request.
- B. Submit written notice to Architect that Project, or a designated portion of Project, is complete, as required by General Conditions, and that the following items have been completed:
1. Contract documents have been reviewed.
 2. Project has been inspected for compliance with Contract Documents.

3. Work has been completed in accordance with Contract Documents and ready for inspection.
 4. Equipment and systems have been tested in presence of Owner's representative and are operational.
 5. Submission to the owner all required operating manuals, warranties and documentation.
 6. Request that Architect review the work completed.
 7. Submit payment request showing 100% completion for portion of work claimed as "substantially complete", or list the incomplete items, value of incomplete items, time to complete those items and reason for the incompleteness. Include supporting documents as required.
 8. Removal from the project site temporary facilities and services, along with construction tools and mock-ups.
- C. Inspection Procedures: Upon receipt of the Contractor's request for Substantial Completion Certification Inspection, the Architect will either proceed with the inspection or advise the Contractor of prerequisites not fulfilled. Following initial inspection, the Architect will note Substantial Completion or advise Contractor of work that must be performed and repeat inspection when requested and assured that work has been substantially completed. Results of completed inspection will form initial "punch-list" for final acceptance.
- D. Re-inspection Procedures: The Architect will re-inspect work upon receipt of notice from the Contractor that the work has been completed. The Architect will bill the owner directly for punch list items not accepted after the second inspection and requiring additional inspection. The dollar amount is to be agreed to with the owner. This amount is to be deducted from final payment to Contractor.
- E. When the Architect certifies that the Work is substantially complete, the Contractor shall immediately do the following:
1. Obtain Certificate of Occupancy, if required.
 2. Prepare and submit Closeout documents.

1.5 – PREREQUISITES TO FINAL ACCEPTANCE

- A. Prior to requesting Final Inspection for Certification of Final Acceptance and Final Payment as required by the General Conditions the following items must have been completed and/or submitted to the Owner or Owner's Representative:
1. Record Documents and related record information as outlined below.
 2. Submit final payment request with final releases and supporting documentation not previously submitted and accepted.
 3. Submit copy of final punch-list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance.
 4. Deliver tools, spare parts, extra stocks of materials, and similar physical items.
 5. Operation and Maintenance Data.
 6. The guarantees, warranties and bonds.
 7. Parts and Maintenance Materials.
 8. Complete final clean-up requirements, including touch-up painting of marred surfaces.
 9. Evidence of Compliance with requirements of governing authorities, including:
 - a. Certificate of Occupancy, if required.
- B. Send Closeout submittals to Owner with transmittal letter in duplicate containing the following:

1. Date
2. Project title and number.
3. Contractor's name and address.
4. Certification that each Project Record Document, as submitted is complete and accurate.
5. Signature of the Contractor, or his authorized representative.

1.6 - RECORD DOCUMENTS

- A. As work progresses prepare and maintain record documents as specified below, including amendment and change order drawings, these shall be referred to as "Record Documents." Do not use record documents for construction purposes; protect from deterioration. The Contractor shall keep an up to date copy of all documents and have accessible to the Architect for reference during working hours. Upon completion of project turn record documents over to Owner.
1. Record Drawings: Maintain one (1) print set of contract drawings in clean, undamaged condition, with mark-up of actual installations which vary from the work as originally shown. Give particular attention to concealed work, which would be difficult to measure and record at a later date.
 2. Record Specifications: Maintain one (1) copy with mark-up of variations in actual work from that specified. Give particular attention to substitutions, option selections, etc.
 3. Record Shop Drawings: This includes Product Data, Certifications and Laboratory Test Reports: Maintain one (1) copy of each approved shop drawing and product data submittal, certification or report. Show all shop drawing items on the Record Drawings where the shop drawing item caused a change in the contract documents.

1.7 – OPERATION AND MAINTENANCE MANUALS

- A. Provide operation and maintenance manuals for each system or piece of equipment specified. Organize information into binder form with a table of contents and tabbed sections. The cover of the binder should read "Operations and Maintenance Manual" it should list the name of the project and project number and date of completion. The Manual's contents should include, but not be limited to the following:
1. Description of each system.
 2. Installation instructions.
 3. Maintenance instructions.
 4. Emergency instructions and safety requirements.
 5. Corrected shop drawings.
 6. Approved product data and system test procedure.
 7. Copies of approved certifications and laboratory test reports.
 8. Copies of Warranties.
 9. Parts list, including source of supply.
 10. Name, Address, and Phone number of each subcontractor who installed equipment and local system representative.

PART 2 - PRODUCTS
NOT USED

PART 3 - EXECUTION
NOT USED

END OF SECTION 01700

SECTION 020900
LEAD-BASED PAINT ABATEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including General Supplementary Conditions and Division 1 Specifications Sections, of the Contract Documents apply to this Section.

1.2 PROJECT DESCRIPTION

- A. A lead-based paint abatement project is being undertaken at 155 Shore Road in Clinton, Connecticut. The lead-based paint abatement work is being funded by a Community Development Block Grant (CDBG) under the Department of Housing Occupied Rehabilitation and Rebuilding Program (OORR).
- B. The site building consists of a single-family residential building. Notification to the Connecticut Commission on Culture & Tourism has been made to determine if the building is eligible for listing on the National Register of Historic Places and a response is pending.
- C. A lead-based paint risk assessment was performed on the interior of the dwelling unit and the exterior. Toxic levels of lead-based paint were identified on various components and surfaces. There are no known lead-based paint abatement orders on the inspected building.
- D. Under federal regulation 24 CFR 35, Subpart J, Rehabilitation, for a property receiving greater than \$25,000.00 per unit, all identified interior lead hazards are required to be abated and all exterior lead-based paint hazards may be remediated utilizing interim control (non-permanent) measures. Lead-based paint abatement will be performed throughout the interior of the dwelling units and interim controls will be used on the exteriors. All lead-based paint abatement work specified in the Scope of Work must be performed by a State of Connecticut licensed Lead Abatement Contractor. Interim control work may be performed by a USEPA certified Renovation, Repair and Painting (RRP) contractor.
- E. All lead-based paint abatement and hazard control work shall be conducted in compliance with all Federal, State and local regulations. Specifically, work shall conform with The Department of Housing and Urban Development (HUD) Guidelines For the Control and Evaluation of Lead Based Paint in Housing, The United States Environmental Protection Agency (USEPA), The State of Connecticut Department of Public Health (DPH) Lead Poisoning Prevention and Control Regulations, The State of Connecticut Department of Environmental Protection (DEP) Hazardous Waste Disposal regulations and the Department of Labor Occupational Safety and Health Administration (OSHA) Lead in Construction Final Rule 29 CFR 1926.62.

1.3 SCOPE OF WORK

- A. The general scope of work entails the following:
1. Enclosure of wood floors in specified areas
 2. Installation of exterior siding

3. Paint stabilization on exterior upper trim
4. Any surface that was not defective at the time of inspection or was not intended to be disturbed by renovations must be assumed to contain toxic levels of lead-based paint. If any surfaces are disturbed or uncovered during the renovation project, they must be treated as lead-based paint and either abated or left in intact condition at the completion of the job.

SEE ATTACHED TABLE A FOR SCOPE OF WORK.

REPAIRS PRIOR TO LEAD HAZARD REDUCTION					
Item #	Location	Component	Side	Quantity	Repair
NONE					

1.4 SITE EXAMINATION

- A. The Contractor shall visit the site and examine all structures located thereon. The specifications shall be compared with the existing field conditions. The Contractor will examine all parts of the existing structure to which new work will be connected, attached or applied, and notify Eagle Environmental of any conditions detrimental to the proper and timely completion of the work.
- B. The Contractor shall, as a part of their bid, notify Eagle Environmental of any discrepancies, errors, or omissions that might have been discovered in the specifications for the purpose of making such corrections or adjustments as may be necessary. Unless specifically noted otherwise in the bid, any additional work by other trades or by the contractor that is required in order for the Contractor to finish the job will be assumed to be included in the bid price. If it should appear that any work called for in the specifications is not in accordance with State, local or federal laws or ordinances, the Contractor shall immediately notify Eagle Environmental.

1.5 LEAD PLANNER/PROJECT DESIGNER INFORMATION

- A. Name of Planner/Project Designer: Kristen Liljehult
 Certificate Number: 002153
 Firm: Eagle Environmental, Inc.
 Address: 8 South Main Street
 City: Terryville State: Connecticut Zip: 06786
 Telephone Number: (860) 589-8257

1.6 INSPECTION REPORT INFORMATION

- A. Inspector Name: Kristen Liljehult
 Title: Lead Inspector/Risk Assessor
 Certificate Number: 002206
 Firm Name: Eagle Environmental, Inc.
 Firm License Number: 001723
 Telephone Number: (860) 589-8257
- B. Inspector Name: Andrew Carnevale
 Title: Lead Inspector/Risk Assessor
 Certificate Number: 002247
 Firm Name: Eagle Environmental, Inc.

Firm License Number: 001723
Telephone Number: (860) 589-8257

1.7 OWNER INFORMATION

- A. Name: Mark Lender
Address: 155 Shore Road
City: Clinton State: Connecticut Zip: 06413
Home Telephone: (917) 607-6917

1.8 CONTRACTOR INFORMATION

- A. Company Name: State of Connecticut licensed Lead Abatement Contractor
Contractor License Number: Not applicable at this time
Contact Person: Not applicable at this time
Address: Not applicable at this time
City: N/A State: N/A Zip: N/A
Telephone Number: N/A

1.9 APPLICABLE CODES

- 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 lead paint abatement. Specifically, the Contractor shall comply with the requirements of the following:
1. Occupational Safety and Health Administration: OSHA
 - a. 29 CFR 1910 General Industry Standards
 - b. 29 CFR 1910.1025 Lead Standard for General Inventory
 - c. 29 CFR 1910.134 Respiratory Protection
 - d. 29 CFR 1910.1200 Hazard Communication
 - e. 29 CFR 1910.245 Specifications for Accident Prevention (Sign and Tags)
 - f. 29 CFR 1926.62 Construction Industry Standard
 2. State of Connecticut Department of Energy and Environmental Protection: DEEP
 - a. Connecticut DEEP Regulations (Section 22a-209-8(l) and Section 22a-220 of the Connecticut General Statutes)
 3. State of Connecticut Department of Public Health: DPH
 - a. 19a-111-1 thru 19a111-11 Lead Poisoning Prevention and Control Regulations.
 4. USEPA
 - a. 40 CFR 745.100 - .119 Final Rule
 - b. 40 CFR Part 261 United States Environmental Protection Agency
 - c. 40 CFR 745 Subpart E
 5. Department of Housing and Urban Development: HUD

- a. Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing, dated June 1995.
- b. 24 CFR Part 35 Lead-Based Paint Poisoning in Certain Residential Structures.

1.10 FEES, PERMITS AND LICENSES

- A. The Contractor shall comply with the provisions of all permits or applications required by the work specified, as well as make all submittals required under those auspices.

1.11 SEQUENCING AND SCHEDULING

- A. The Contractor shall extend full cooperation to Owner in all matters involving the use of Owner's facilities. At no time shall the Contractor cause or allow to be caused conditions which may cause risk or hazard to the general public or conditions that might impair safe use of the facility. The Contractor shall provide electricity, water and portable sanitary facilities for this project.
- B. The Contractor shall submit a time-line schedule, not date specific, to Owner and Consultant for integration into the overall project schedule. Coordinate the work of this section with the needs of the Owner. Phasing and scheduling of this project will be at the discretion of the Owner and shall not proceed in any area without the express consent of the Owner. The Contractor shall be available within 24 hours' notice for additional work or rework, if after acceptance of the work, it is found that full abatement was not achieved from the initial work effort as determined by the Owner.
- C. The proposed time line for the work in this Section, as noted above, shall show the time involved from start to finish of abatement operations, including preparation, removal, clean-up, and tear-down portions of the job.
- D. A final written schedule shall be prepared for approval by the Owner and the Consultant.
- E. The Contractor shall complete all work in a unit prior to proceeding to the next unit.

1.12 BUILDING OCCUPANCY

- A. The building is currently occupied and there are no children under the age of six (6) years old residing at the site. The building occupants may occupy the dwelling in areas where Lead Abatement and interim control work is not being performed with the understanding that the work areas cannot be re-occupied before dust wipe clearance samples pass the Standard Clearance Criteria. The Lead-Abatement Contractor shall ensure safe entrance and egress for the occupants while work is being accomplished. Also the contractor must ensure that bathrooms are available with the contingency that occupants will remain during lead abatement work.

1.13 NOTIFICATION TO CONNECTICUT COMMISSION ON CULTURE & TOURISM

- A. Notification to the Connecticut Commission on Culture & Tourism has been made and a response is pending.

1.14 NOTIFICATIONS

- A. For RRP work, notifications shall include the following:
 1. The Contractor shall provide written notification to the Architect's representative a minimum of five (5) days prior to work at the site.

2. The Owner shall notify the tenants a minimum of five (5) days prior to any lead renovation work.
 3. The Contractor is required to comply with the following information distribution requirements. No more than 60 days before beginning renovation activities in any residential dwelling unit of target housing, the firm performing the renovation must:
 4. Provide the owner or adult occupant of each unit the pamphlet titled Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools and comply with one of the following:
 5. Obtain, from the owner, a written acknowledgement that the owner has received the pamphlet (Each Unit).
 6. Obtain a certificate of mailing at least 7 days prior to the renovation.
 7. If the Contractor is unsuccessful in obtaining written acknowledgement from an adult occupant, certify in writing that the pamphlet has been delivered to the dwelling. The certification must include the date and method of delivery of the pamphlet, names of the persons delivering the pamphlet, reason for lack of acknowledgement, signature of the representative of the Contractor performing the lead renovation work and the date of signature.
 8. The Contractor shall have an adult occupant sign the Pre-Renovation Disclosure Form. A signed copy of the disclosure form shall be submitted to Architect's representative with the notice of the start date.
- B. For lead-based paint abatement work, notifications shall include the following:
1. The Lead Abatement Contractor shall notify the Local Health Department a minimum of five days prior to the commencement of abatement activities. The notification shall be made in writing and copies shall be sent to the Owner and Eagle Environmental, Inc.
 2. The Owner shall notify the tenants a minimum of five (5) days prior to abatement work.
 3. The Owner shall provide a notice to occupants no more than fifteen (15) calendar days after the hazard reduction activities have been completed. Notice of hazard reduction shall include, but not be limited to:
 - a. A summary of the nature, scope and results (including clearance results) of hazard reduction activities.
 - b. A contact name, address and telephone for more information.
 - c. Available information on the location of any remaining lead-based paint in the rooms, spaces or areas where hazard reduction activities were conducted on a surface by surface basis.
- 1.15 EPA RENOVATE, REPAIR AND REPAINTING RULE
- A. The Contractor must apply, pay the fee and become an EPA Certified RRP firm.
 - B. The Contractor must ensure that that all renovators working in target housing and child occupied facilities, common areas or exteriors are EPA certified renovators or trained by a certified EPA renovator.

Renovators can become certified by successfully attending an Eight (8) hour RRP EPA accredited training course.

- C. The Contractor must provide all tenants with a copy of EPA's Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools pamphlet no earlier than sixty (60) days prior to the date renovation activities are to be performed.
- D. The Contractor shall have an adult occupant sign the Pre-Renovation Disclosure Form. A signed copy of the disclosure form shall be submitted to the Architect's representative with written notice within five days of the commencement of the work.
- E. The Contractor shall review the testing results and become familiar with the locations of lead-based paint within the scope of the tested areas. The Contractor must assume that all untested painted surfaces are lead-based paint unless inspected by a licensed lead inspector/risk assessor or tested with an EPA approved lead testing kit and proven otherwise.
- F. The Contractor is required to ensure renovators minimize lead paint/dust exposure by performing activities in a lead safe manner See Sections 3.1 through 3.4 in this document for requirements, including posting of lead warning signs in plain view of the occupants.
- G. The Contractor shall ensure all sub-contractors performing renovation activities on assumed lead-based paint above the EPA de minimus level are EPA RRP certified firms and employees are EPA certified renovators or trained by a certified EPA RRP renovator. The Contractor shall document the firm's and renovator's certification numbers.
- H. The Contractor shall provide documentation to include:
 - 1. The Contractor's EPA RRP Firm Certification Number.
 - 2. The Contractor's EPA RRP Renovator's Certification Number.
 - 3. Documentation that all other non-certified employees have been trained on RRP practices by an EPA RRP Certified Renovator.
 - 4. The Contractor is required to keep all documents for a minimum of three (3) years.

1.16 INSURANCE

- A. The contractors shall carry per General Conditions the following insurances:
 - 1. Workman's Compensation
 - 2. Lead Abatement Liability Insurance
 - 3. Manufacturer's and Contractor's Liability Insurance

1.17 CONTRACT ASSIGNMENT

- A. The contractor shall not assign this contract without written consent of the Program's representative. A request for written consent shall be approved by DOH. Eagle Environmental, Inc. must be informed prior to the assignment of this contract.

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.
- C. Polyethylene sheet in a roll size to minimize the frequency of joints shall be delivered to job site with factory label indicating 6 mil.
- D. Polyethylene disposable bags shall be six (6) mil. Tie wraps for bags shall be plastic, five (5) inches long (minimum), pointed and looped to secure filled plastic bags.
- E. Tape or adhesive spray will be capable of sealing joints in adjacent polyethylene sheets and for attachment of polyethylene sheet to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions.
- F. Impermeable containers are to be used to receive and retain any lead containing or contaminated materials until disposal at an acceptable disposal site. (The containers shall be labeled in accordance with EPA and DOT standards.)
- G. HEPA filtered exhaust systems shall be used during any dust generating deleading operations.
- H. For manual scraping activities, Contractor shall supply each worker with multiple newly sharpened scrapers on a daily basis.
- I. Sanders, grinders, wire brushes and needle gun removal equipment shall be equipped with a HEPA filtered vacuum dust pick-up system.
- J. Other materials such as lumber, nails and hardware necessary to construct and dismantle the decontamination enclosures and the barriers that isolate the work area shall be provided as appropriate for the work.
- K. Machine Sanding Equipment - Sanders shall be of the dual action, rotary action, orbital or straight line system type, fitted with a high efficiency particulate air (HEPA) dust collection system.
- L. Air compressors utilized to operate this equipment shall be designed to continuously provide 90 to 100 psi or as recommended by the manufacturer.
- M. Heat Blower Gun Equipment: Any electric operated heat-blower gun used shall be a flameless electrical-paint-softener type. Heat-blower shall have electronically controlled temperature settings to allow usage below a temperature of 700 degrees Fahrenheit.
- N. Liquid encapsulants used on this project shall be an approved encapsulant by the State of Connecticut Department of Public Health.
- O. Paints and primers shall contain less than 0.06% lead in wet film.

2.2 REPLACEMENT AND COVERING MATERIALS

- A. Unless stated otherwise, all replacement materials/products, shall meet the minimum code requirements for such applications.
- B. All materials shall have Energy Star ratings where applicable.
- C. Paints and primers must be less than or equal to the following VOC levels: Flats 50 g/L; non-flats 50 g/L; floor paint 100 g/L.

Grams per Liter (g/L) levels are based on a combination of the Master Painters Institute (MPI) and Green Seal standards.

- D. All caulks, sealants and adhesives must comply with Rule 1168 of the South Coast Air Quality Management District. All caulks, sealants must comply with regulation8, rule 51 of the Bay Area Quality Management District.
- E. Unless stated otherwise, replacement windows, doors and other materials and products shall be of equal or better quality of those specified in this Lead-Based Paint Hazard Control Plan.
- F. Exterior Entrance Doors
 - 1. Unless otherwise noted, new exterior doors must be 1 3/4" thick 24 gauge thermally broken galvanized and bonderized steel insulated core doors, with an adjustable sill, magnetic weather stripping, and 1 1/2 pair 3 1/2 x 3 1/2 loose pin butt hinges, use Thermo-Tru Steel Foam Core Insulated Exterior Doors or approved equal.
 - 2. Install single cylinder deadbolt plus passage set as manufactured by Schlage or equivalent. Provide owner with 2 keys for each lock.
 - 3. Door shall be accurately cut and fitted to frames and must operate freely without binding. Insulate between doorjamb and rough opening with spun fiberglass prior to trimming the interior of the door.

G. Storm Doors

- 1. Existing storm/screen doors are to be re-hung or replaced with similar units. If re-hung, they must be fully operational.

H. Interior Doors

- 1. Unless otherwise noted, install 1 3/8" hollow core luan door manufactured by Brosco or equivalent.
- 2. If a hollow core door doesn't meet building and/or CT Fire Safety Code, install a door to meet code.
- 3. Shim doors plumb, level and square. New doors shall be installed in pine jambs with 1 pair of 3" loose pin butt hinges. Fasten doors to rough framing through shims with 10-penny finish nails. Trim out both sides of new doors with finger jointed casings to match existing. Glue miters before fastening trim to jamb and wall. Fasten trim to walls with 6-penny finish nails and to jambs with 4-penny nails.

Set heads of nails below surface of wood and fill with putty. Install passage set as manufactured by Schlage, Kwikset, Harlock or approved equal.

I. Wood Replacement Windows - Historic

1. Furnish and install new wooden sashes with full screens. Contractor must measure the bevel of the sill if it is different from 14 degrees. The bevel must be custom specified to manufacturer. Sashes shall have insulated double-glazing with non-corroding fiberglass screens in aluminum frames. Windows must have tilt in sashes, Low E glazing, and must comply with Emergency Escape requirement of the building code for all bedrooms. Grid pattern must match prior windows being replaced.
2. Windows shall be manufactured by Harvey, Weathershield, Marvin or equivalent. Submit for approval prior to ordering. Windows shall be installed in accordance with the manufacturer's recommendations.
3. Frames and sash shall be properly adjusted for tight closure and easy operation. Frames shall be thoroughly sealed at the interfaces with the walls prior to completion of finish work. Screw in and caulk edges to seal. Install jamb liners. Cut aluminum coil stock or vinyl to fit the window well.
4. Remove sashes from opening; disconnect weights and pullys from lower sash and salvage. Then scrape window glazing compound and remove glazing points and glass, use a mild paint removal product and conditioner for wood. Install glass panes and glazing with points as well as pully and weight system. Jamb liners and aluminum coil stock shall be installed in opening then window sashes. Window sashes shall not be installed until XRF testing is performed.

J. Vinyl Replacement Windows

1. Furnish and install new rigid vinyl replacement windows with 5/8" Low E double-pane insulating glass and non-corroding half-height lockable fiberglass screens in aluminum frames. Windows must have tilt in sashes, welded frames, cam and sash locks, and must comply with Emergency Escape requirement of the building code for all bedrooms.
2. Windows shall be manufactured by Harvey (Classic Series), Viking, Mercury-Excellum, NorthEast (DH 100) or equivalent. Windows shall be installed in accordance with the manufacturer's recommendations.
3. Frames and sash shall be properly adjusted for tight closure and easy operation. Frames shall be thoroughly sealed at the interfaces with the walls (inside & out) prior to completion of finish work.

K. Basement Vinyl Replacement Windows

1. Remove and discard as lead waste any leaded basement windows.
2. Furnish and install new vinyl replacement basement windows manufactured by Harvey, Viking, Mercury-Excellum or equivalent. Windows shall be installed in accordance with the manufacturer's recommendations.

L. Vinyl Siding

1. Siding shall be of first quality manufactured by Vipco, Certainteed, or equivalent. Color by Owner. Provide 50-year warranty. Apply Amocor XP38 fanfold insulation board or equivalent, following the manufacturer's instructions to enclose lead paint.
2. Replace lead-based paint containing components of attic vents or combination gable and soffit vents to meet ventilation requirements for roof and attic areas.
3. Install vinyl siding and aluminum or vinyl wrapped trim following manufacturer specifications.

M. Exterior Porch Flooring

1. Tongue & Groove flooring, if specified or requested as an Alternate, is to be 5/4" Fir or 3/4" Mahogany. When Plywood is specified, materials to be 1/2" Exterior Grade Plywood.
2. Include edge moldings to cover any exposed leaded materials. Caulk all seams. Prime & paint using sand or other non-slip additive.

N. Interior Porch Flooring

1. When specified, material to be 1/4" luan.
2. Include edge moldings to cover any exposed leaded materials. Caulk all seams.

O. Radiator Covers

1. Radiators must be restored to a sound substrate using high heat paint before the cover is installed.
2. Radiator covers must be removable (for example by unscrewing a bracket) in case repairs are necessary. The cover must be a professionally manufactured radiator cover or be made using metal grille mounted in a pine frame. Note that heat must be able to rise through the top as well. Plywood is not acceptable for use in radiator covers.

P. Sheetrock and wood enclosure materials shall meet current code requirements for such products and specified applications.

Q. Overhead Garage Doors

1. Furnish and install new overhead garage doors (number required to replace those removed) and any and all tracks, rails, springs, hardware, etc. to make operational. Hardware should include an outside handle and keyed lock for each door installed. The doors must be three-layer pressure bonded construction (steel + insulation + steel) construction. Standard Colors – Owner to choose any standard color available from Manufacturer. Warranty must be a minimum of 20 years from Manufacturer.
2. Manufacturer to be Clopay or equal and meet Clopay's Premium Series specifications or equal. No automatic openers are to be included. If, however, the existing Overhead door units being replaced have automatic openers, contractor to reuse and make operable or replace with new unit(s).

3. Submittal of Manufacturers catalog cuts with all pertinent information, including warranty information, to be submitted to Waterbury Health Department and Owner for approval prior to placing order.

PART 3 - EXECUTION

3.1 WORKER HYGIENE PRACTICES

- A. Workers shall don protective gear prior to entering work area including respirators, disposable coveralls, and footwear. No street clothes shall be permitted to be worn under protective clothing. The Contractor shall provide a clean area for workers to store street clothes and personal belongings.
- B. Eye protection, head protection, and ear protection shall be provided to each worker.
- C. While leaving respirators on, workers shall remove all gross contamination, debris, and dust from disposable coveralls and remove coveralls and footwear and place in hazardous waste disposal bag prior to leaving work area.
- D. The Contractor shall establish a wash station in close proximity to the work area where workers shall decontaminate their person. The wash station shall be supplied with warm water and soap and an ample supply of drying towels. Wash water shall be tested for proper disposal.
- E. All equipment used by workers inside the work area shall be wet wiped or bagged for later decontamination before removal from work area.
- F. The Contractor is responsible for using safe procedures to avoid electrical hazards. All temporary electrical wiring will be protected by GFIs.

3.2 WORK AREA PREPARATION

- A. Interior
 1. The tenants are responsible for packing all personal items for removal out of proposed abatement area(s). The Lead Abatement Contractor shall move the personal belongings to an easily accessible area to maintain tenant access to their belongings.
 2. The Lead Abatement Contractor shall conduct pre-cleaning activities including HEPA vacuuming floors and horizontal surfaces in the proposed work area.
 3. The Lead Abatement Contractor shall remove all moveable objects from the proposed work area.
 4. The Lead Abatement Contractor shall cover all non-moveable objects with a single layer of six (6)-mil polyethylene sheeting.
 5. The Lead Abatement Contractor shall cover the floors with two (2) layers of six (6)-mil polyethylene sheeting.
 6. The Lead Abatement Contractor shall cover ducts, diffusers, exhausts, windows, door openings or other penetrations with a single layer of six (6)-mil polyethylene sheeting.

7. The Lead Abatement Contractor shall post lead warning signs at all ingresses to the work area.
8. The Lead Abatement Contractor shall establish a worker decontamination facility adjacent to the work area(s). The decontamination facility shall be equipped with warm running water, soap, and drying towels.
9. The Lead Abatement Contractor may elect to construct mini-enclosures around the interiors of the windows or components scheduled for abatement.

If mini-enclosures are not constructed, the entire room shall be treated as the work area and must be cleaned in accordance with this Specification.

10. Install six (6)-mil critical barriers over the interior of window openings if window will be removed from the exterior of the building.

B. Exterior

1. Cover all shrubbery, plantings, stoops, etc. with opaque tarps, which will prevent damage or burning from the sun.
2. Regulate the exterior work area with lead-warning tape. The lead warning tape shall extend around the perimeter of the work area creating a minimum of a ten (10)-foot buffer zone between abatement operations and the warning tape.
3. Post lead-abatement warning signs at conspicuous areas around the perimeter of the abatement area. Unauthorized personnel shall be prohibited from entering the abatement area.
4. Utilize six (6)-mil polyethylene sheeting on the ground and/or porch floors. The sheeting shall extend a minimum of ten (10) feet from the foundation of the building. Sheeting shall be secured to the foundation utilizing duct tape.
5. The edges of the sheeting shall be weighted to avoid blowing or lifting.

3.3 LEAD ABATEMENT PROCEDURES

A. Window Removal and Replacement Procedures

1. The Contractor shall conduct work area abatement preparation as specified in Sections 3.1 and 3.2 prior to conducting abatement activities.
2. The Contractor shall HEPA vacuum any loose or flaking paint from the component prior to removing the component.
3. The Contractor shall manually remove the window sashes in the following sequence:
 - a. Remove exterior window screens/storms where necessary and recycle
 - b. Remove interior window stops
 - c. Remove inner sash by cutting sash cords

- d. Remove wood parting beads
 - e. Remove outer sash by cutting sash cords
4. Stabilize all loose paint on window jambs, wells and exterior sills. HEPA vacuum window jambs, wells and exterior sills.
 5. Prior to installation of new vinyl windows, the Lead Abatement Contractor shall label the components containing lead-based paint with the warning "Danger: Lead-Based Paint" in permanent ink behind the enclosure.
 6. The Lead Hazard Reduction Contractor shall Remove window sash weights from cavities and insulate the entire cavity of the window jambs and header with insulation prior to or after window installation. If the Lead Abatement Contractor chooses to use a spray foam insulation, the MSDS must be provided to the Program's consultant for approval prior to use.
 7. Exterior blind window stops shall abut the new vinyl window. Exterior blind window stops shall be liquid encapsulated or enclosed with aluminum coil stock depending on the scope of work. Re-use interior stops. Replace at Contractor's cost broken or un-useable interior stops.
 8. The Lead Abatement Contractor shall immediately place components into appropriate waste container. All components containing LBP that were removed during the abatement project shall be assumed to be hazardous waste until analytical results of the TCLP test are received. Metal components shall be recycled at an approved recycling facility.

B. Door Removal and Replacement Procedures

1. The Lead Abatement Contractor shall conduct work area abatement preparation as specified in Sections 3.1 and 3.2 prior to conducting abatement activities.
2. Where doors are to be replaced, remove the door from the hinges and remove the hinges from the jamb. Avoid damaging the existing jamb if it is to remain.
3. Reinstall the new door, hinges and appropriate hardware. Ensure the door is plumb and open and closes smoothly.
4. All doors shall be accurately cut and fitted to frames and must operate freely without binding.
5. Entry doors shall be insulated between the door jambs and rough opening with spun fiberglass prior to trimming the interior of the door.
6. Where door systems are to be replaced with pre-hung doors, remove the door, casing if necessary and avoid damage, then remove the door stop and door jamb.
7. Reinstall new pre-hung system, level and plumb. The door should open and close smoothly.

8. Re-install the door casing if removed. If the door casing was damaged during removal, install a new door casing to match existing trim.

C. Enclosure Procedures

1. The Lead Abatement Contractor shall conduct work area abatement preparation as specified in Sections 3.1 and 3.2 prior to conducting abatement activities.
2. The Lead Abatement Contractor shall stabilize all loose paint on components prior to enclosure.
3. The Lead Abatement Contractor shall label the components containing lead-based paint with the warning "Danger: Lead-Based Paint" in permanent ink behind the enclosure.
4. The Lead Abatement Contractor shall utilize materials that will provide a permanent enclosure designed to be effective for twenty (20) years.
5. Aluminum coil stock enclosures shall be fastened with manufacturer recommended materials. All seams shall be caulked with compatible non-asbestos caulk.
6. Rigid enclosure materials such as paneling, sheetrock and plywood shall be mechanically fastened in conjunction with a non-asbestos compatible adhesive. All seams shall be caulked and or compounded with a compatible non-asbestos material.

D. Liquid Encapsulation Procedures

1. The Lead Abatement Contractor shall conduct work area abatement preparation as specified in Sections 3.1 and 3.2 prior to conducting abatement activities.
2. HEPA vacuum and wet scrape all loose and flaking paint from each component to be encapsulated. The surface shall be rendered intact prior to de-glossing activities.
3. Clean each component to be encapsulated. Cleaning solutions shall be compatible to the liquid encapsulant that will be applied. Ensure that encapsulants are not applied over dirt, grease, mildew, rust, oil or chalk. Measures shall be taken to remove dirt, grease, mildew, rust, oil or chalk prior to encapsulation.
4. De-gloss each surface prior to encapsulation in accordance with the manufacturer's recommended procedures for de-glossing.
5. Conduct patch tests on each type of architectural component to be encapsulated. Where feasible, the size of the patch test shall be a minimum of fifteen (15) inches by fifteen (15) inches on each component. The surface shall be rendered intact, cleaned and de-glossed prior to performing the patch test. The encapsulant shall be allowed to dry and cure as required by manufacturer specifications.

6. Cut an "X" into the center of the patch test area ensuring that the cut goes entirely through the encapsulant to the substrate. Each cut shall be a minimum of two (2) inches long. Use the cutting tool to lift the encapsulant from the substrate at the intersection of the cutting points. If greater than one-half (1/2) inch of encapsulant is removed, the patch test fails.
7. Failure of a patch test shall require a second patch test to be performed. The same procedures shall be followed for the second patch test.
8. Fill gouges, holes, gaps, or other imperfections or damage, which may result in failure of the encapsulant. The damaged areas shall be repaired with materials compatible to the encapsulant.
9. Encapsulants shall not be applied when the air temperature of the room where encapsulants are to be applied is below forty (40) degrees F or above ninety-five (95) degrees F. In addition, relative humidity is not to be above eighty-five (85) percent or the temperature of the target surface is above the dew point. Document temperature, relative humidity and the temperature of the target surface on a daily basis. Encapsulation procedures may not be conducted when the temperature, relative humidity or target surface temperature are not in compliance with this section or with the manufacturer's specification, which ever is more stringent.
10. All encapsulants shall be applied in accordance with the manufacturer's specifications, including but not limited to temperature requirements, humidity requirements, mil thickness requirements, number of coats, application methods, surface preparation requirements, dry time, cure time, and tinting.
11. Encapsulants used for this project shall be an encapsulant that has been approved by the State of Connecticut Department of Public Health for use in the State of Connecticut.
12. All lead-based painted components and surfaces that are liquid encapsulated shall be placed on a Lead-Based Paint Management Plan for continual surveillance.

E. Paint Stabilization Procedures

1. The Contractor shall conduct work area abatement preparation as specified in Sections 3.1 and 3.2 prior to conducting abatement activities.
2. Lightly mist the surface to be stabilized with water. Wet scrape the surface with a drag scraper or putty knife to remove the loose paint. Continuously mist during scraping. Do not dry scrape.
3. Feather paint edges as necessary to remove high spots in paint that may be subject to future peeling.
4. Remove all raised paint edges that may be present on surfaces or components.
5. Surface contaminants that prevent adhesion should be removed by cleaning with a five (5) percent trisodium phosphate (TSP) and water solution. These contaminants generally include dirt, grease, and soap films.

6. Once all loose paint is removed, clean the surface with a five (5) percent TSP and water solution.
7. Wet wipe the surface with clean water. Allow to dry, prime and repaint.

F. Paint Removal Procedure

1. Complete all necessary work area preparation in each area prior to commencing abatement in that area.
2. Conduct on-site paint removal utilizing one (1) of the following approved methods or combinations thereof:
 - a. Heat gun (not to be operated over seven hundred (700) degrees F).
 - b. Power equipment with attached HEPA dust collection device
 - c. Chemical removal agent
3. Remove all layers of paint and or primers down to a bare substrate. The contractor is responsible for reducing lead levels below the toxic level on components where paint removal is specified.
4. Eagle Environmental, Inc. shall conduct on site XRF testing of abated components to determine completeness of paint removal. The component(s) shall not be considered completely abated until XRF measurements are below the toxic level as defined by State regulations.

G. Specialized Cleaning Procedures

1. Complete all necessary work area preparation in each area prior to commencing abatement in that area.
2. Follow the cleaning procedure described below for hard smooth or semi-porous surfaces:
 - a. Conduct a thorough HEPA vacuuming of the surface.
 - b. Wash the floor with a string mop equipped with wringer. Use a five (5) percent phosphate and water solution. Wring the mop into an empty bucket after each cleaning and before dipping the mop back into the cleaning solution.
 - c. Conduct a clean rinse mopping on the floor.
 - d. Conduct a second HEPA vacuuming of the surface.
3. Follow the cleaning procedure described below for area rugs:
 - a. HEPA vacuum the top side of the rug for one (1) minute per ten (10) square feet.
 - b. Fold the rug in half and HEPA vacuum the back side of the rug and underlying floor at a rate of one (1) minute per ten (10) square feet.
 - c. Repeat Step 2 for the other half of the rug.
 - d. Unfold the rug and HEPA vacuum the top at a rate of two (2) minutes per ten (10) square feet.

4. Follow the cleaning procedure described below for carpet:
 - a. HEPA vacuum the carpet at a rate no faster than two (2) minutes per ten (10) square feet. Vacuum in a side-to-side motion.
 - b. HEPA vacuum the carpet in the opposite direction at a rate no faster than 2 minutes per 10 square feet. Vacuum in a side-to-side motion.

H. Soil Abatement Procedures

1. Complete all necessary work area preparation in each area prior to commencing abatement in that area.
2. Where soil is to be covered, perform the following:
 - a. HEPA vacuum and or rake surface soil to remove loose paint chips.
 - b. Remove small and large debris through raking or manual pick-up.
 - c. Install rolled weed guard material where specified.
 - d. Install the following covering materials at the specified depths:
 - 1) Bark Mulch – four (4) inch minimum depth.
 - 2) Top Dressing Topsoil – two (2) inch minimum depth.
 - 3) Gravel, Pea Stone, etc. – four (4) inch minimum depth.
3. Where soil is to be removed, perform the following:
 - a. Regulate work area around soil removal location(s).
 - b. Remove visible surface paint chips prior to soil removal.
 - c. Manually remove soil to specified depth. Lightly mist soil with water to reduce dust.
 - d. Place soil in appropriate waste container.
 - e. Apply replacement soil or materials as specified. Replacement soil must contain less than two hundred (200) mg/kg of lead.
4. Where ground cover is to be applied, perform the following:
 - a. Perform steps specified in 3.3 and/or 3.3.
 - b. Where grass seed is to be planted, utilize a K31 Fescue or equivalent hearty seed.
 - c. Prepare soil for planting by lightly raking and loosening soil.
 - d. Apply seed at manufacturer's recommended covering rate.
 - e. Cover with straw mulch and water.
 - f. Install temporary caution tape around planted areas.
 - g. Caution tape to be removed by Owner once grass is established.

3.4 CLEANING

A. Interior

1. The Contractor shall ensure that all tools and materials are adequately cleaned at the completion of each shift.

2. The Contractor shall remove all gross waste from the lead abatement area prior to conducting final cleaning operations. All waste shall be treated as hazardous until the analytical results from the TCLP tests are received.
3. The Contractor shall thoroughly HEPA vacuum all flat surfaces and components including polyethylene sheeting within and/or adjacent to the lead abatement work area.
4. The Contractor shall remove polyethylene sheeting from floors and non-moveable objects following the initial cleaning. Polyethylene sheeting shall be folded inwards from the corners and folded upon itself.
5. The following final cleaning shall be conducted following removal of polyethylene sheeting:
 - a. HEPA vacuum floors and horizontal surfaces.
 - b. Wet clean floors and horizontal surfaces with a five (5) percent phosphate solution
 - c. Conduct second HEPA vacuuming on floors and horizontal surfaces.
 - d. Wait twenty-four (24) hour for dust settlement period.
 - e. Repeat steps a, b and c.

3.5 FINISH WORK AND WORKMANSHIP

- A. Refer to the project Architect's specifications for finish work and workmanship requirements.

3.6 DISPOSAL OF WASTE MATERIALS

- A. The Contractor shall perform the following:
 1. Work with Owner to see that waste is disposed of according to local, state and federal law and regulations and at the minimum practical cost.
 2. All waste should be considered hazardous lead waste. The Contractor is responsible for proper disposal of all waste generated during the project.
 3. All primary waste materials generated during lead hazard reduction, i.e. windows, doors, wood components, plaster, etc. shall be characterized for proper disposal utilizing the TCLP method. The cost associated with the TCLP sampling and analysis shall be the responsibility of the Contractor.
 4. All secondary waste materials generated during lead hazard reduction, i.e. disposable clothing, polyethylene sheeting, waste water, etc., shall have confirmatory TCLP testing to determine waste characterization. This testing shall be performed and paid for by the Contractor.
 5. The Lead Abatement Contractor shall comply with the requirements for small quantity generators (generates between one hundred (100) kg and one thousand (1000) kg of hazardous waste in a month or accumulates no more than one thousand (1000) kg of hazardous waste on-site at any one time and stores waste for no greater than ninety (90) days).

6. The Contractor shall ensure that all hazardous waste generated is sent off-site to permitted hazardous waste treatment, storage, or disposal facilities (TSDF).
7. The Contractor shall use DEEP permitted transporters for transport of hazardous waste.
8. The Contractor shall apply for a temporary EPA identification number, where applicable. Hazardous waste manifests must be utilized which bear this I.D. number.
9. The Contractor must comply with hazardous waste containerization requirements including but not limited to maintaining the containers in good condition, keeping containers closed and locked while in storage, properly labeling and dating containers, and using containers which are DEEP approved for over the road use.
10. The Contractor shall develop a written inspection schedule to inspect any containers of hazardous waste at least weekly.
11. The Contractor must designate an emergency coordinator who will be responsible for coordinating emergency response measures. Basic emergency information must be listed in writing, and posted next to the on-site telephone.

This information must include the name and number of the emergency coordinator.

12. The Contractor must develop a written contingency plan for the site, which describe actions personnel will take in response to fires or other emergencies that may result in a release of hazardous waste constituents. The plan must meet certain content requirements and copies of the plan must be submitted to certain local emergency response officials.
13. The Contractor must provide written notification to local fire departments and/or police regarding the location, nature, and duration of the lead-removal project, and regarding the type and quantity of hazardous waste that may be stored at the site.
14. The Contractor must train their employees in hazardous waste management. They must maintain certain documentation regarding their training program, including the names, job titles, and job descriptions of the employees involved with hazardous waste management, a written description of the training that is given, and records documenting that employees have been trained. Annual updates of training must also be given.
15. The Contractor may not store hazardous waste on-site for greater than ninety (90) days without a TSDF permit.
16. Before leaving the site for the last time, the Contractor must remove any remaining hazardous waste and must decontaminate any equipment, storage areas, structures, soil, etc. contaminated as a result of the removal or storage of the hazardous waste generated at the site.

B. Contractor and Owner shall comply with the following:

1. Contractor agrees to assume responsibility of all waste. However, if total project waste is ten (10) cubic yards or less, Owner may agree to assume responsibility for all lead containing waste by signing an agreement to accept and properly dispose of the waste.

Contractor agrees to place the lead containing waste in a location designated by Owner and under conditions that do not contaminate the ground or area around the lead containing waste.

2. The Owner shall promptly remove waste from site and dispose of in accordance with all applicable laws.
3. The Owner shall designate a secure area where waste can be stored and is not subject to exposure to inclement weather, tampering or contamination of surrounding area(s).

3.7 POST RENOVATION CLEANING VERIFICATION

- A. The Lead Abatement Contractor must perform a visual inspection to determine whether dust, debris or residue is still present. If present, the abatement area shall be re-cleaned following the specified cleaning procedures.
- B. Contractor cleaning verification cloths will not be used for this project. Dust sampling by the Program's Consultant shall be performed in each interior area where lead-hazard reduction work was performed. This includes specialized cleaning procedures and window replacement procedures performed from the exterior of the building.
- C. The following criteria must be met for final clearance dust wipe samples where renovation work is performed:
 1. Floors: 40ug/ft²
 2. Window Sills: 250ug/ft²
 3. Window Wells: 400ug/ft²
- D. Clearance dust wipe samples that fail shall be re-cleaned at the Contractor's expense until dust wipe sampling meets the applicable criteria.

3.8 RECORDKEEPING

- A. The Contractor must retain and, if requested, make available to EPA all records necessary to demonstrate compliance with the RRP Rule for a period of 3 years following completion of the renovation.
- B. The Contractor must retain the following records and provide a copy to Program's Consultant at the completion of the project:
 1. Records or reports certifying that a determination had been made that lead-based paint was not present on components affected by the renovation including reports by a State of Connecticut licensed Lead Inspector, records by a Certified Renovator after using EPA-recognized test kits, including an identification of the manufacturer and model of any test kits used, a description of the components that were tested including their locations, and the results of each test kit used.
 2. Signed and dated acknowledgement of receipt of notification dissemination of pamphlet.
 3. Certifications of attempted delivery of pamphlet.
 4. Certificates of mailing of pamphlet.

5. Records of notification activities performed regarding common area and child occupied facilities renovations.
6. Documentation of compliance that a certified renovator was assigned to the project, the certified renovator provided on-the-job training for workers used on the project, the certified renovator performed or directed worker who performed all the tasks, the certified renovator performed the post-renovation cleaning verification.

**SCOPE OF WORK
155 SHORE ROAD
CLINTON, CONNECTICUT**

Item #	Room	Component	Side	Quantity	Abatement Method
INTERIORS					
1	Bedroom 3 (008)	Painted wood floor	-	All	Enclose existing floor with new pre-finished laminant wood floor (follow manufacturers installation instructions)
2	Bedroom 2 (009)	Painted wood floor	-	All	Enclose existing floor with new pre-finished laminant wood floor (follow manufacturers installation instructions)
3	Hallway (011)	Painted wood floor	-	All	Enclose existing floor with new pre-finished laminant wood floor (follow manufacturers installation instructions)
EXTERIORS					
4	Facades	Upper trim, soffits, fascias, cornerboards	A, B, C, D	All	Paint Stabilize
5		Exposed wood siding where shingles are missing (Area by rear bay window)	B	All	Install new cedar shingles and cornerboard to match existing

CAPITOL STUDIOS ARCHITECTS

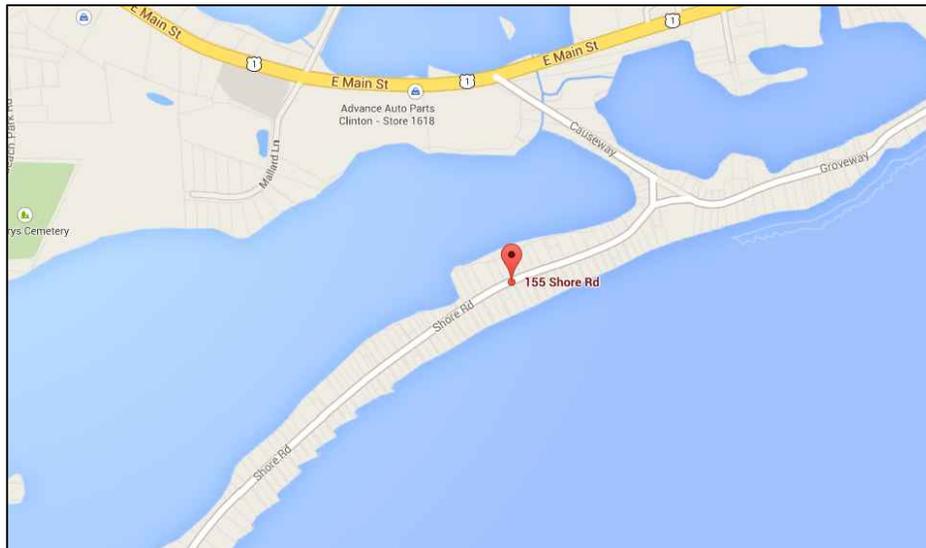
155 SHORE ROAD
CLINTON, CONNECTICUT

EAGLE PROJECT NUMBER: 14-028.12T4

INDEX OF DRAWINGS

SP-1 SITE PLAN
FP-1 FIRST FLOOR PLAN
FP-2 SECOND FLOOR PLAN
FP-3 THIRD FLOOR PLAN

LOCATION MAP



JUNE 3, 2014



8 SOUTH MAIN STREET, SUITE 3
TERRYVILLE, CONNECTICUT 06786
860-589-8257

FIRST FLOOR

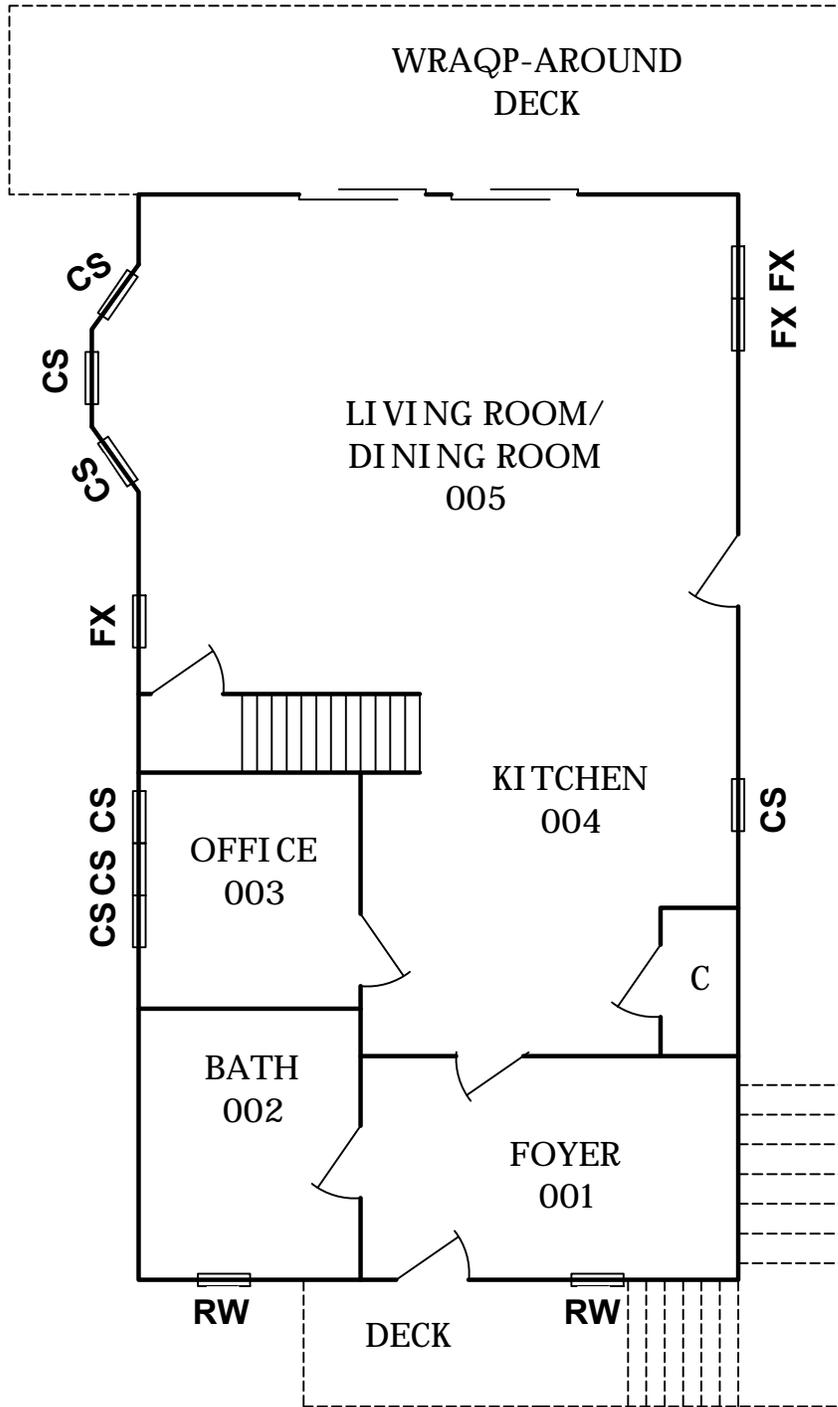
SIDE-C

WINDOW KEY:

CS = CASEMENT

FX = FIXED

RW = REPLACEMENT
WOOD SASH
(TESTED NEGATIVE
FOR LEAD-BASED
PAINT)



NOT TO SCALE

SIDE-A (STREET SIDE)



8 SOUTH MAIN STREET, SUITE 3
TERRYVILLE, CONNECTICUT 06786
860-589-8257

SHEET NO.

FP-1

SHEET 2 OF 4

DATE: 06/02/2014
PROJECT NO.: 14-028.12-T4
DRAWN BY: VB
REVIEWED BY: AH

ENVIRONMENTAL REVIEW
155 SHORE ROAD
CLINTON, CONNECTICUT
FIRST FLOOR PLAN

SECOND FLOOR

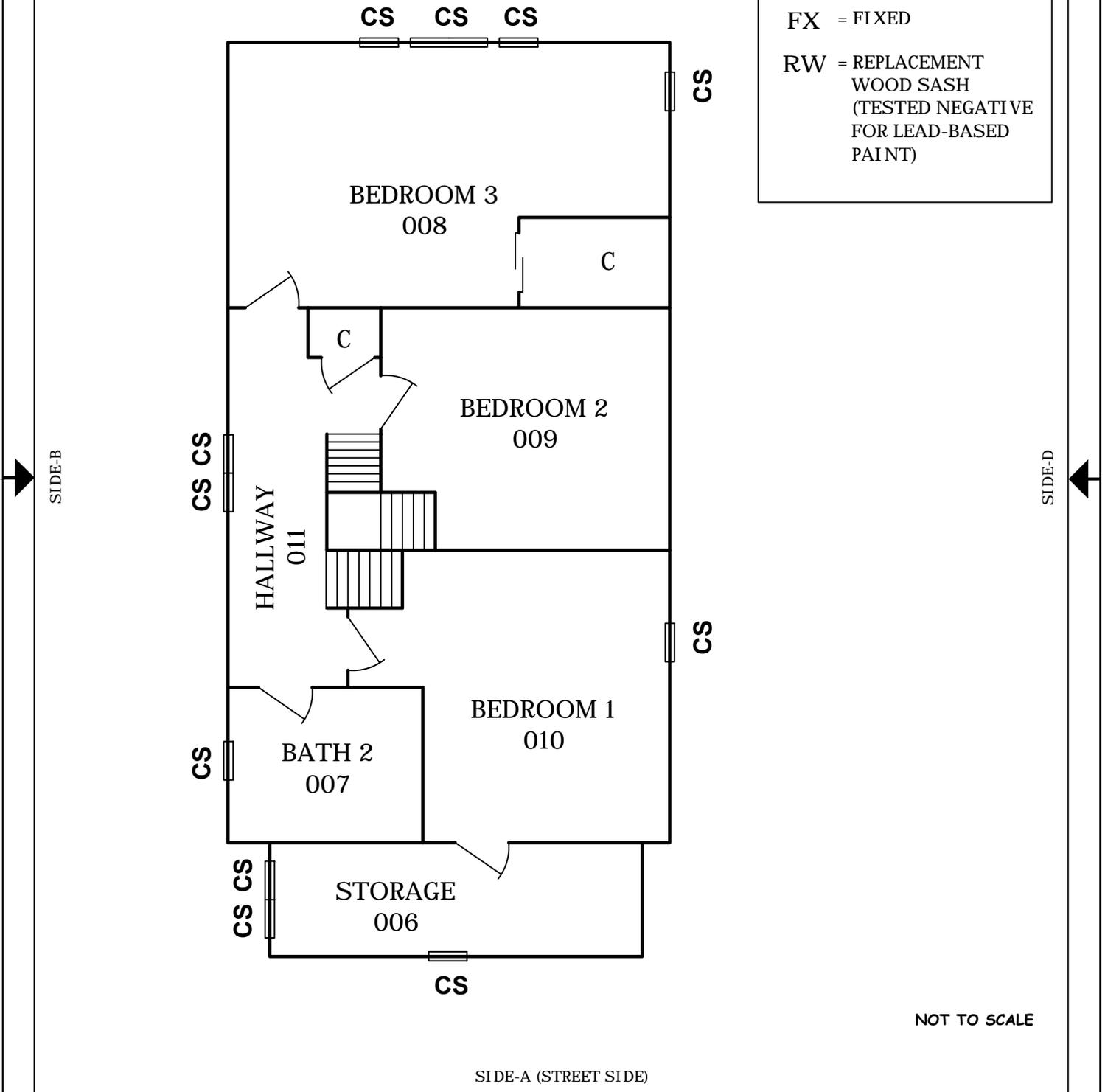
SIDE-C

WINDOW KEY:

CS = CASEMENT

FX = FIXED

RW = REPLACEMENT
WOOD SASH
(TESTED NEGATIVE
FOR LEAD-BASED
PAINT)



NOT TO SCALE



EAGLE
Environmental, Inc.

8 SOUTH MAIN STREET, SUITE 3
TERRYVILLE, CONNECTICUT 06786
860-589-8257

SHEET NO.

FP-2

SHEET 3 OF 4

DATE: 06/02/2014
PROJECT NO.: 14-028.12-T4
DRAWN BY: VB
REVIEWED BY: AH

ENVIRONMENTAL REVIEW
155 SHORE ROAD
CLINTON, CONNECTICUT
SECOND FLOOR PLAN

THIRD FLOOR

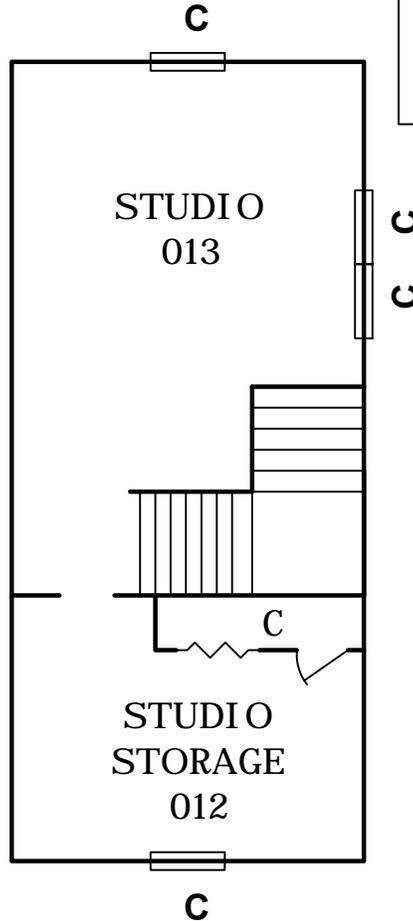
SIDE-C

WINDOW KEY:

CS = CASEMENT

FX = FIXED

RW = REPLACEMENT
WOOD SASH
(TESTED NEGATIVE
FOR LEAD-BASED
PAINT)



NOT TO SCALE

SIDE-A (STREET SIDE)



EAGLE
Environmental, Inc.

8 SOUTH MAIN STREET, SUITE 3
TERRYVILLE, CONNECTICUT 06786
860-589-8257

DATE: 05/27/2014
PROJECT NO.: 14-028.12-T4
DRAWN BY: VB
REVIEWED BY: AH

ENVIRONMENTAL REVIEW
155 SHORE ROAD
CLINTON, CONNECTICUT
THIRD FLOOR PLAN

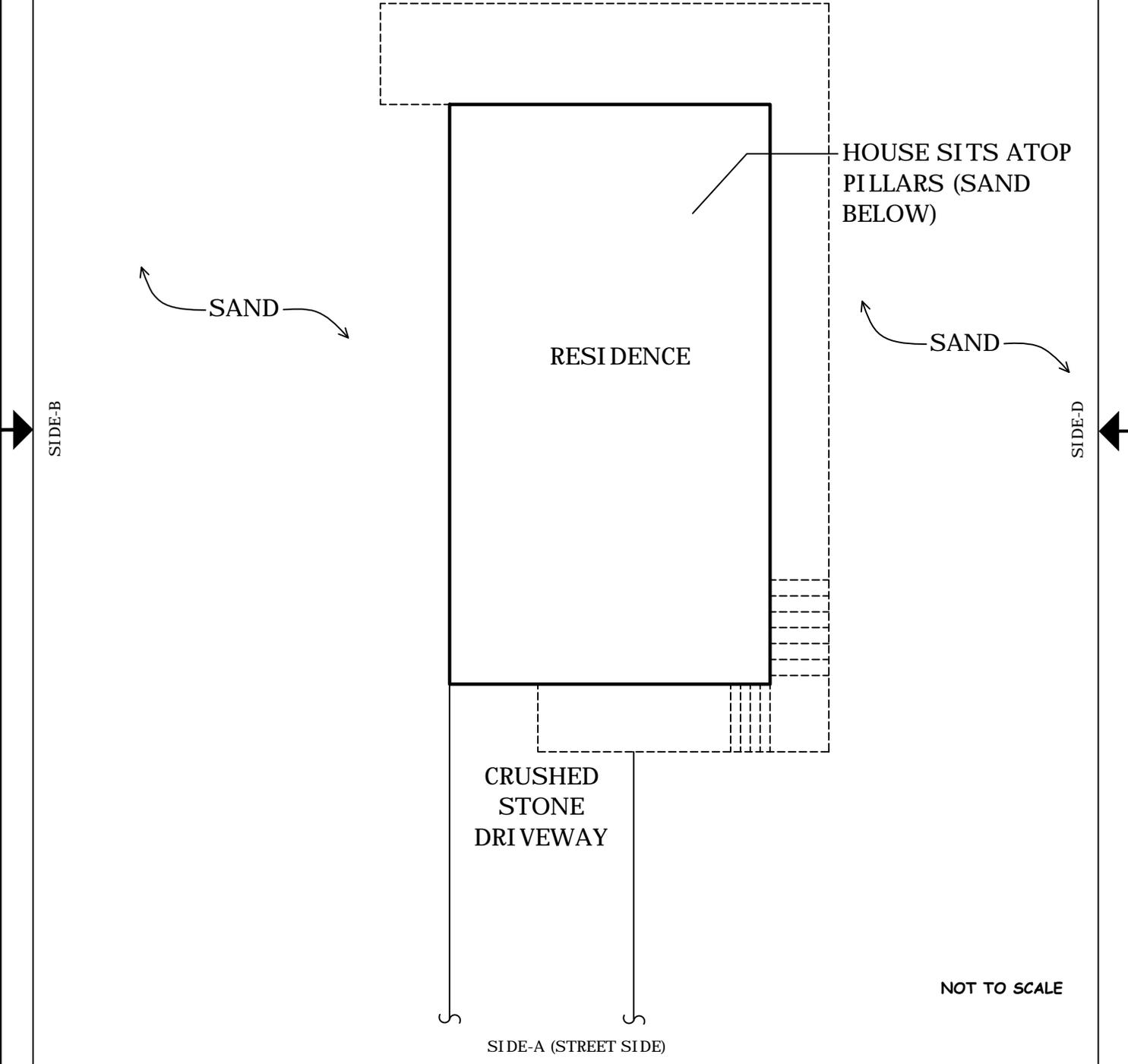
SHEET NO.

FP-3

SHEET 4 OF 4

SITE PLAN

SIDE-C



NOT TO SCALE

SIDE-A (STREET SIDE)



EAGLE
Environmental, Inc.

8 SOUTH MAIN STREET, SUITE 3
TERRYVILLE, CONNECTICUT 06786
860-589-8257

DATE: 06/02/2014
PROJECT NO.: 14-028.12-T4
DRAWN BY: VB
REVIEWED BY: AH

ENVIRONMENTAL REVIEW
155 SHORE ROAD
CLINTON, CONNECTICUT
SITE PLAN

SHEET NO.

SP-1

SHEET 1 OF 4

The State of Connecticut
Department of Housing (DOH)
Community Development Block Grant
Disaster Recovery Program (CDBG-DR)
DOH Occupied Rehabilitation and Rebuilding Program (OORR)

Bid Package for
Lender Residence
155 Shore Road
Clinton, Connecticut 06413
Project # 2068

-END OF SECTION-

\\Eaglesvr\public\2014 Files\2014 Specs\CSA - Capital Studio Architects\Hurricane Sandy\155 Shore Rd, Clinton\020900 LENDER \$25K - LBP
Abatement.docx

SECTION 05520
STAINLESS STEEL TUBE RAILING

PART 1 - GENERAL

1.1 CONDITIONS AND REQUIREMENTS

The General Conditions, Supplementary Conditions, and Division 1 – General Requirements apply.

1.2 SECTION INCLUDES

Horizontal stainless steel cable railing system.

1.3 RELATED SECTIONS

Section 06100 – Rough Carpentry

1.4 PERFORMANCE REQUIREMENTS

Provide cable railing systems, including top rail, bottom rail, end posts, intermediate posts, intermediate cable braces, cables, and cable hardware capable of withstanding both gravity loads and the following loads and stresses conforming to the applicable building codes:

1. Handrails:
 - a. Concentrated load of 200 lbs applied in any direction.
 - b. Uniform load of 50 lbs/ft applied in a horizontal direction at top of rail.
 - c. Concentrated and uniform loads do not need to be considered acting concurrently.
2. Intermediate Posts and Cables:
 - a. Minimum uniform load of 50 lbs/sq ft over gross area of cable railing system of which they are a part, plus local wind load.
 - b. Loads of intermediate posts and cables and other loads do not need to be considered acting concurrently.

Design railing components and cable hardware to withstand loads encountered without excessive deflection or distortion when cables are tensioned to comply with requirements of applicable building codes.

1.5 SUBMITTALS

Submit under provisions of Section 01400 – Submittals.

Product Data: Submit for decorative metal railings and components.

Shop Drawings: Submit for decorative metal railings. Include plans, elevations, sections, details, and attachments to other work.

1. For products required to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

Samples: Submit samples of each of the following illustrating the exposed finish and workmanship.

2. Railing frame components.
3. Intermediate cable braces.
4. Cables and cable hardware.

Manufacturer's Certificates: Signed by manufacturers of stainless steel products certifying that products furnished comply with requirements.

Warranty: Submit manufacturer's standard warranty for decorative metal railing system.

1.6 QUALITY ASSURANCE

Source Limitations: Obtain decorative metal railings through one (1) source from a single manufacturer.

Mockups: Construct a mockup to verify finish selections and to serve as a standard for aesthetic effects and qualities of materials and execution.

1. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

Pre-Installation Meeting: Schedule pre-installation meeting two weeks before start of fabrication of railing frame components at project site.

1.7 PROJECT CONDITIONS

Field Measurements: Prior to fabrication, verify actual locations of walls, , columns, posts, stairs, and other construction contiguous with railings by field measurements and indicate measurements on shop drawings.

1.8 DELIVERY, STORAGE AND HANDLING

Deliver decorative metal railings with manufacturer's protective covering intact.

Store and handle in strict compliance with manufacturer's written instructions and recommendations.

Protect from damage due to weather, excessive temperature, and construction operations.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

Basis-of-Design Product: The design for wire rope decorative metal railings is based on SunRail™ manufactured by Atlantis Rail Systems, Division of Suncor Stainless, Inc., 70 Armstrong Road, Plymouth, MA 02360; telephone: 800-541-6829, fax 508-732-9798; Web Site: www.atlantisrail.com.

Substitutions shall be limited to those approved in advance by the Architect and shall be equal to and shall meet the same quality, design, workmanship and warranty as the basis of design. The Architect will make final determination on equality.

2.2 MATERIALS

Stainless Steel Structural Tubing: ASTM A554, Type 316, minimum tensile strength 70,000 psi; two (2) inch diameter.

2.3 RAILING FRAME COMPONENTS

Intermediate Posts: Minimum .062 inch wall thickness stainless steel tubing.

1. Maximum Spacing: As indicated on Drawings.
2. Connect top rail with manufacturer supplied Top Railing Mounting Bracket.

End Posts: Minimum .062 inch wall thickness stainless steel tubing.

Tubing Finish: Satin

Connecting Joints: Cast Type 316 stainless steel.

2.4 WIRE ROPE AND WIRE ROPE HARDWARE

Wire Rope: ASTM A492, Type 316 stainless steel wire; 5/32-inch diameter, 1x19 configuration, conforming to dimensional properties specified in MIL-W-87161.

1. Orientation: As indicated on Drawings.

2. Spacing: As indicated on Drawings.
3. Finish: Mill

Turnbuckle Assemblies: RailEasy™ stainless steel turnbuckles with mechanical swaging capability. Slotted base has capability of making up to 45 degree angles. Concave base fits two (2) inch diameter posts.

2.5 FASTENERS

Stainless Steel Components: Type 316 stainless steel fasteners.

Fasteners for Anchoring Railings to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction indicated and capable of withstanding design loads.

2.6 RAILING CAP

Provide manufacturer's standard post cap for attachment of wood railing cap, including all associated hardware.

Railing cap shall be Garapa Wood as detailed on the Drawings.

2.7 FABRICATION

Fabricate decorative metal railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support specified structural loads.

Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect decorative metal railing members to other work, unless otherwise indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

Examine substrates, areas, and conditions to which decorative metal railings attach or abut, for compliance with requirements that affect installation and anchorage and with requirements for installation tolerances. Notify the Architect in writing of conditions detrimental to proper completion of the work. Do not proceed with work until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

Install in strict accordance with manufacturer's written installation instructions and recommendations and approved shop drawings. Coordinate installation with adjacent work to ensure proper clearances.

Install decorative metal railing system plumb, level, square, and rigid.

Anchor and assemble decorative metal railing system to mounting surfaces as indicated on Drawings. Field welding of components is not acceptable except as an additional source of structural support.

Install wire rope and hardware, and terminate and tension wire rope, in accordance with manufacturer's written installation instructions.

Ensure that wire ropes are parallel to each other, free of kinks, sags or other defects, and clean.

Replace defective or damaged wire ropes and hardware as directed by the Architect.

3.3 ADJUSTING

Adjust wire ropes and hardware as required to provide a complete and properly installed decorative metal railing system.

3.4 CLEANING AND PROTECTION

Clean exposed surfaces of decorative metal railing systems in accordance with manufacturer's recommendations.

Protect installed products from damage or soiling until completion of project.

Remove and replace decorative metal railing components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage, including dented and bent components.

END OF SECTION

SECTION 06100
ROUGH CARPENTRY

PART 1 - GENERAL

1.1 - RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special Conditions, and Division 1 Specification sections, apply to work specified in this section.

1.2 - WORK INCLUDED

- A. All contractors are to review specifications and drawings for complete scope of work regarding their trade. This work is to include Base Bid items and Unit Price items.
- B. Provide wood, nails, bolts, screws, framing anchors and other rough hardware, and other items needed, and perform rough carpentry, including sheathing installation, for the construction shown on the Drawings, as specified herein, and as needed for a complete and proper installation.

1.3 - RELATED WORK SPECIFIED ELSEWHERE

- A. Section 07600: Sheet Metal Flashing and Trim
B. Section 07900: Sealants
C. Section 05520: Stainless Steel Tube Railing

1.4 - REFERENCE STANDARDS

- A. Codes and Standards:
1. In addition to complying with pertinent codes and regulations of governmental agencies having jurisdiction, unless otherwise specifically directed or permitted by the Architect comply with:
 - a. "Product Use Manual" of the Western Wood Products Association for selection and use products included in that manual;
 - b. "Plywood Specification and Grade Guide" of the American Plywood Association.
 - c. State of Connecticut Basic Building Code - Recommended Nailing Schedule and the Wood Frame Construction Manual, 105 MPH.
 - d. Additional Framing methods shall comply with the "Wood Frame Construction Manual for One- and Two-Family Dwellings" as published by the American Forest & Paper Association.
- B. Requirements for all lumber:
1. Lumber shall be surfaced all four sides (S4S).
 2. Maximum moisture content of rough framing lumber, 2" or less nominal thickness, shall be 19% at the time of delivery to the site.
 3. All lumber exposed to weather, or within 12" of ground shall be pressure treated. Comply with AWPB LP 2.

1.5 - SUBMITTALS

- A. Submit manufacturer's product data for non-wood materials and accessories. Submit samples if requested by the Architect. Approved samples may be incorporated into the work.

1.6 - DELIVERY, STORAGE & HANDLING

- A. Except as otherwise approved by the Architect, determine and comply with manufacturer's recommendation on product handling, storage, and protection.

B. Deliveries:

1. Stockpile materials sufficiently in advance of need to assure their availability in a timely manner for this Work.
2. Make as many trips to the job site as are needed to deliver materials of this Section in a timely manner to ensure orderly progress of the Work.

C. Compliance:

1. Do not permit materials not complying with the provisions of this Section to be brought onto or to be stored at the job site.
2. Promptly remove non-complying materials from the job site and replace with materials meeting the requirements of this Section.

D. Protection:

1. Deliver the materials to the job site and store, in a safe area, out of the way of traffic, and shored up off the ground surface.
2. Identify framing lumber as to grades, and store each grade separately from other grades.
3. Protect metals with adequate waterproof outer wrapping.
4. Use extreme care in off loading of lumber to prevent damage, splitting, and breaking of materials.

PART 2 - PRODUCTS

2.1 - GRADE STAMPS

- A. Identify framing lumber by a grade-marked in accordance with The Western Wood Products Association, or such other grade stamp as is approved in advance by the Architect.
- B. Identify plywood as to species, grade, and glue type by the stamp of the American Plywood Association.
- C. Identify other materials of this Section by the appropriate stamp of the agency approved in advance by the Architect.

2.2 - MATERIALS

- A. Provide materials in the quantities needed for the Work shown on the Drawings, and meeting or exceeding the following standards of quality:
1. Structural Lumber: Douglas Fir-Larch, No. 1 Grade or better, meeting $F_b = 1,000$ psi, $E = 1,500$ ksi
 2. LVL (Laminated Lumber) – $F_b = 2,650$ psi, $E = 2,000$ ksi
 3. Sheathing plywood CDX - match existing thickness.
 4. 5/4" Pine Trim Boards: No. 1 Grade or better.
 5. Blocking, nailers, and other non-structural uses: Any species of structural lumber, construction grade or better.
 6. Fasteners: (Install per manufacturer's recommendation where applicable)
 - a. Nails/Screws:
 - (1) Use common except as otherwise noted.
 - (2) Comply with Fed Spec FF-N-1.
 - (3) Use stainless steel at exterior locations.
 - (4) For power activated nail guns use 300 headed pin fasteners, or approved equal.
 - (5) Simpson Connectors, or approved equal. Products shall be stainless steel.

2.3 - OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Architect.

PART 3 - EXECUTION

3.1 - SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.
- B. Any existing conditions deemed structurally deficient shall be brought to the attention of the Architect.

3.2 - WORKMANSHIP

- A. Produce joints which are tight, true, and well nailed, with members assembled in accordance with the Drawings and with pertinent codes and regulations.
- B. Selection of lumber pieces:
 1. Carefully select the members.

2. Select individual pieces so that knots and obvious defects will not interfere with placing bolts or proper nailing, and will allow making of proper connections.
3. Cut out and discard defects which render a piece unable to serve its intended function.
4. Lumber may be rejected by the Architect, whether or not it has been installed, for excessive warp, twist, bow, crook, mildew, fungus, or mold, as well as for improper cutting and fitting.

C. Do not shim any framing component.

3.3 - GENERAL FRAMING

A. General:

1. In addition to framing operation normal to the fabrication and erection indicated on the Drawings, install wood blocking and backing required for the work of other trades.
2. Set horizontal and sloped members with crown up.
3. Do not notch, cut, or bore members for pipes, ducts, or conduits, or for other reasons except as shown on the Drawings or as specifically approved in advance, in writing by the Architect.

B. Bearings:

1. Make bearings full unless otherwise indicated on the Drawings.
2. Finish bearing surfaces on which structural members are to rest so as to give sure and even support.
3. Where framing members slope, cut or notch the ends as required to give uniform bearing surface.
4. Where roof rafters are to be replace or assist existing deteriorated rafters, install new rafter the full length of the span of the existing rafter. At the direction of the Architect or the Structural Engineer, install adjacent to and in contact with the existing rafter.

3.4 - BLOCKING AND BRIDGING

A. Install blocking as required to support items of finish and to cut off concealed draft openings, both vertical and horizontal, between ceiling and floor areas.

3.5 - ALIGNMENT

A. On framing members to receive a finished surface, align the finish subsurface to vary not more than 1/8" from the plane of surfaces of adjacent furring and framing members.

3.6 - INSTALLATION OF SHEATHING

A. Placement:

1. Place sheathing with face grain perpendicular to supports and continuously over at least two supports, except where otherwise shown on the Drawings.
 2. Center joints accurately over supports, unless otherwise shown on Drawings.
- B Protect sheathing from moisture by use of waterproof coverings until the sheathing in turn has been covered with the next succeeding component or finish.

3.7 - FASTENING

A. Nailing:

1. Use only common wire nails or spikes of the dimension shown on the Fastening Schedule given in the State of Connecticut Building Code, and the 2009 International Residential Code, except where otherwise specifically noted on the Drawings.
2. For conditions not covered in the Nailing Schedule provide penetration into the piece Receiving the point of not less than 1/2 the length of the nail or spike, provided, however, that 16d nails may be used to connect two pieces of 2" (nominal) thickness.
3. Nail without splitting wood.
4. Pre-bore as required.
5. Remove split members and replace with members complying with the specified requirements.

B. Screws:

1. For lag screws and wood screws, pre-bore holes same diameter as root of threads, enlarging holes to shank diameter for length of shank.

END OF SECTION 06100

SECTION 07300
ASPHALT SHINGLE ROOFING SYSTEM

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Granule surfaced asphalt shingle roofing.
- B. Ice and water shield.
- C. Shingle underlayment
- D. Metal Drip Edges at eaves and rakes.

1.2 RELATED SECTIONS

- B. Section 06100 – Rough Carpentry.
- C. Section 07600 – Sheet Metal Flashing and Trim
- D. Section 07900 – Sealants.

1.3 REFERENCES

- A. ASTM A 653/A 653M - Standard Specification for Steel Sheets, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- B. ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
- C. ASTM D 226 - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
- D. ASTM D 1970 - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection.
- E. ASTM D 3018 - Standard Specification for Class A Shingles Surfaced with Mineral Granules.
- F. ASTM D 3161 - Standard Test Method for Wind-Resistance of Asphalt Shingles (Fan-Induced Method).
- G. ASTM D 3462 - Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules.
- H. ASTM D 4586 - Standard Specification for Asphalt Roof Cement, Asbestos-Free.
- I. ASTM D 4869 - Standard Specification for Asphalt-Saturated Organic Felt Shingle Underlayment Used in Roofing.
- J. ASTM D 6757 – Standard Specification for Inorganic Underlayment for Use with Steep Slope Roofing Products.
- K. ASTM D 7158 – Standard Test Method for Wind Resistance of Sealed Asphalt Shingles (Uplift Force/Uplift Resistance Method)
- L. E 108 - Standard Test Methods for Fire Tests of Roof Coverings.
- M. UL 2218 - Impact Resistance of Prepared Roofing Materials.
- N. UL 2390/ASTM D 6381 – Test Method for Wind Resistant Shingles with Sealed Tabs
- O. ARMA – Asphalt Roofing Manufacturers Association, Residential Asphalt Roofing Manual (latest edition), for standards of materials, manufacturing and installation.

1.4 SUBMITTALS

- A. Within ten (10) calendar days after the Contractor has received the Owner's Notice to Proceed, submit the following:

1. Product Data: Provide manufacturer's printed product information indicating material characteristics, performance criteria, and product limitations.
2. Manufacturer's Installation Instructions: Provide published instructions that indicate preparation required and installation procedures.
3. Necessary data that demonstrates that material complies with requirements of all materials specified.
4. Product samples required for all items.

1.5 QUALITY ASSURANCE

- A. Maintain one copy of manufacturer's application instructions on project site.
- B. Verify that manufacturer's label contains reference to specified ASTM standards.

1.6 ENVIRONMENTAL REQUIREMENTS

- A. Take special care when applying WinterGuard Waterproofing Shingle Underlayment and shingles when ambient or wind chill temperature is below 45 degrees F. Tack WinterGuard in place if it does not adhere immediately to the deck.

1.7 EXTRA MATERIALS

- A. Furnish under provisions of Section 01700.
- B. Provide 100 square feet (1 square) of extra shingles of color specified.

1.8 WARRANTY

- A. Asphalt Fiber Glass Shingles.
 1. Landmark TL, 50 year warranty.
- B. Warranty Supplement: Provide manufacturer's supplemental warranty ("CertainTeed SureStart") to cover labor and materials in the event of a material defect for the following period after completion of application of shingles:
 1. First ten years.
- C. The Contractor shall provide to the Owner a ten (10) year (NDL) "No Dollar Limit" for labor and material. Period of guarantee is from date of Owner's final acceptance.

1.9 HAZARDOUS MATERIALS

- A. No asbestos materials evident. Report available upon request from Architect.

1.10 PROJECT COMPLETION

- A. Final Payment will not be approved until all items as outlined in Section 01700 have been completed.
- B. All guarantees and warranties for new materials shall commence at date of written Final Acceptance of the Work, by the Owner, or its designated agent.

- C. Upon completion of the project, the roofing manufacturer shall provide installation and material inspection warranties and certification of the roof system.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Roof Shingles, Rolled Roofing, Underlayments, Ice & Water Shield: For a standard of quality, material, testing and warranty, provide products as manufactured by CertainTeed Corporation, Architectural Support Group, P.O. Box 860, Valley Forge, PA 19482. Tel: (800) 233-8990, Fax: (610) 341-7940.
- B. Substitutions: Products meeting the quality, availability and specifications of the items specified will be considered at time of Shop Drawing Submittals only.

2.2 ASPHALT FIBER GLASS SHINGLES – (ARCHITECTURAL STYLE)

- A. CertainTeed Landmark: UL Certification of ASTM D3462; Conforms to ASTM D3018 Type I – Self-Sealing; ASTM D3161-08b, Class “F” Wind Resistance; ASTM D3161-03b, Class “F” Wind Resistance (Regional); ASTM D3161-99a Wind Resistance; UL997 Wind Resistance; UL 2390/ASTM D6381 Class “H” and ASTM D7158 Class “H” Wind Resistance; UL 790 Class A Fire Resistance; glass fiber mat base, ceramically colored/UV resistant mineral surface granules across entire face of shingle; two-piece laminated shingle.
1. Weight: 235-245 pounds per square (100 square feet).
 2. Color: As selected by Architect from manufacturer’s standards.
 3. Algae resistant.

2.3 Self-adhering Modified Bitumen Roof System.

- A. Sheathing Paper: Red-rosin type, minimum 3 lb/100 sq. ft.
- B. Base Sheet: ASTM D 4601, Type II, SBS-modified asphalt-impregnated and -coated sheet, with glass-fiber-reinforcing mat, dusted with fine mineral surfacing on both sides.
1. Basis-of-Design Product: Subject to compliance with requirements, provide CertainTeed Corporation; Flintlastic SA NailBase
 2. Weight: 40lb/100sf minimum.
- C. Roofing Membrane Sheet: ASTM D 6164, Grade S, Type I, SBS-modified asphalt sheet smooth surfaced; suitable for application method specified.
1. Basis-of-Design Product: Subject to compliance with requirements, provide CertainTeed Corporation Flintlastic SA MidPly
- D. Granule-Surfaced Roofing Cap Sheet: [ASTM D 6164, Grade G, Type I or II, SBS-modified asphalt sheet; granule surfaced; suitable for application method specified.

1. Basis-of-Design Product: Subject to compliance with requirements, provide CertainTeed Corporation; Flintlastic SA Cap
2. Granule Color: Selected by Architect from Manufacturer's full range.

2.4 SHEET MATERIALS

- A. Eaves and Roof Penetration Protection: CertainTeed "WinterGuard"; ASTM D 1970 sheet barrier of self-adhering rubberized asphalt membrane shingle underlayment having internal reinforcement, and "split" back plastic release film; provide material with warranty equal in duration to that of shingles being applied.

1. CertainTeed WinterGuard Sand

- A. Underlayment: CertainTeed "Roofers' Select", ASTM D 6757; asphalt-impregnated fiberglass-reinforced organic felt designed for use on roof decks as a water-resistant layer beneath roofing shingles. Roofing felt shall be 15 lb. minimum.

- B. Waterproofing Underlayment: CertainTeed "WinterGuard"; ASTM D 1970 sheet barrier of self-adhering rubberized asphalt membrane shingle underlayment having internal reinforcement, and "split" back plastic release film; Use in 'low-slope' areas (below 4:12, but no less than 2:12); provide material with warranty equal in duration to that of shingles being applied.

1. CertainTeed WinterGuard Sand

2.5 ACCESSORY SHINGLES

- A. Accessory ridge shingles shall be "Shadow Ridge" specifically designed for use with "Landmark TL" Series.

2.6 FLASHING MATERIALS

- A. Sheet Flashing: ASTM B 209; minimum 0.040 inch thick aluminum with mill finish.

2.7 ACCESSORIES

- A. Nails: Standard round wire type roofing nails, corrosion resistant; hot dipped zinc coated steel, aluminum, or chromated steel; minimum 3/8 inch (9.5 mm) head diameter; minimum 11 or 12 gage (2.5 mm) shank diameter; shank to be of sufficient length to penetrate through roof sheathing or 3/4 inch (19 mm) into solid wood, plywood, or non-veneer wood decking.
- B. Asphalt Roofing Cement: ASTM D 4586, Type I or II.

2.8 FLASHING FABRICATION

- A. Form flashing to profiles indicated on Drawings, and to protect roofing materials from physical damage and shed water.

- B. Form sections square and accurate to profile, in maximum possible lengths, free from distortion or defects detrimental to appearance or performance.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing site conditions under provisions of other Specification Divisions.
- B. Verify that roof penetrations and plumbing stacks are in place and flashed to deck surface.
- C. Verify roof openings are correctly framed prior to installing work of this section.
- D. Provide Ice & Water Shield around all roof penetrations.
- E. Verify deck surfaces are dry and free of ridges, warps, and voids.
- F. Report damaged or deteriorated roof sheathing to the Architect immediately.

3.2 ROOF DECK PREPARATION

- A. Follow shingle manufacturer's recommendations for acceptable roof deck materials.
- B. Broom clean deck surfaces under eave protection and underlayment prior to their application.

3.3 INSTALLATION – ICE AND WATER SHEILD

- A. Place eave edge and gable edge metal flashing tight with fascia boards. Weather-lap joints 2 inches. Secure flange with nails spaced 8 inches on center.
- B. Apply CertainTeed "WinterGuard" Waterproofing Shingle Underlayment as eave protection in accordance with manufacturer's instructions and per drawings. Starting from the drip edge apply width necessary to provide eave protection to a minimum of 24" horizontally beyond the interior face of the exterior wall, this item must be verified in the field prior to shop drawing submittal.
- C. Apply 36" square CertainTeed "WinterGuard" Waterproofing Shingle Underlayment around all roof penetrations.

3.4 INSTALLATION - VALLEY PROTECTION

- A. For "closed-cut," valleys place one ply of WinterGuard, minimum 36 inches wide, centered over valleys, lap joints 6" minimum. Follow instructions of shingle and waterproofing membrane manufacturer.

3.5 INSTALLATION - PROTECTIVE UNDERLAYMENT

- A. Roof Slope 4:12 or Greater: Install one layer 15 lb. minimum asphalt felt shingle underlayment perpendicular to slope of roof and lap minimum 4 inches over eave protection.

- B. Weather-lap and seal watertight with asphalt roofing cement items projecting through or mounted on roof. Avoid contact of solvent-based cements with WinterGuard.

3.6 INSTALLATION - METAL FLASHING

- A. Weather-lap joints minimum 2 inches.
- B. Seal work projecting through or mounted on roofing with asphalt roofing cement and make weather-tight.

3.7 INSTALLATION – DRIP EDGES

- A. Apply aluminum drip edge at eaves and anchor securely into sheathing. Verify that sheathing at eave is not rotted and will accept nails.
- B. Apply aluminum drip edge strip at all roof edges over the shingle underlayment and anchor to roof sheathing.

3.8 INSTALLATION - ASPHALT SHINGLES

- A. Install shingles in accordance with manufacturer's instructions for product type and application specified.
- B. Unless required otherwise by the manufacturer, install all shingles as follows: Place one (1) nail 1 inch from each end of shingle and 12 inches from each end; four (4) nails are required in each shingle. All (4) nails must be placed on a line 5-5/8" above the butt edge of the shingle and just below the self-sealing strip. Nails shall penetrate a minimum of 3/4" into sheathing. Note: Fastening of shingles with staples will not be allowed.

3.9 INSTALLATION – VENT STACKS

- A. Remove existing flashing and deposits off site as debris.
- B. Examine existing roof sheathing for rot. Document damaged sheathing with the Owner's Representative or Architect prior to sheathing replacement.
- C. Install Ice & Water Shield around all pipe penetrations.
- D. Install new one piece prefabricated metal flashing over existing vent stack. Anchor flange into roof sheathing with roofing nails, and weave into shingles to make watertight.

3.10 FIELD QUALITY CONTROL

- A. Field inspection will be performed by the Architect with photographs of the Work in Progress.
- B. Visual inspection of the Work will be provided by the Architect.

3.11 PROTECTION OF FINISHED WORK

- A. Protect finished work under provisions of Section 01700.

- B. Replace shingles which have become damaged as a result of the Contractor's execution of the work.
- C. Do not permit traffic over finished roof surface.

END OF SECTION 07300

SECTION 07600
SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 - DESCRIPTION OF THE WORK

- A. The extent of each type of flashing and sheet metal work is indicated on the drawings and as listed, but not limited to that shown below. Contractors are to review all specifications and drawings for full extent of Base Bid work and Unit Price work.
 - 1. Roof edge trim.
 - 2. Metal flashing.
- B. All existing flashing to be cut away and removed prior to new base flashings as may be required to complete the intended scope of work.

1.2 - RELATED WORK SPECIFIED ELSEWHERE

- A. Section 06100 – Rough Carpentry
- B. Section 07300 – Asphalt Shingle Roofing systems

1.3 - JOB CONDITIONS

- A. Coordinate work of this Section with interfacing and adjoining work for proper sequencing of each installation. Ensure best possible weather resistance and durability of the work and protection of materials and finishes.

1.4 - HAZARDOUS MATERIALS

- A. Existing flashing cement has been found to have hazardous material. A report is available from the owner. It is not the intention that this project requires abatement of such hazardous materials by this contractor. It is intended that the scope of work be completed in coordination with the hazardous materials and be done within the quantities allowed, as specified by state and local authorities regulating abatement of these materials. If the contractor suspects that certain building materials may contain hazardous materials, he shall notify the owner in writing and the owner will test the suspect materials

1.5 – SUBMITTALS

- A. Submit each item in this section in accordance to the Conditions of the General Contract.
- B. Product Data: Include manufacturer's material and finish data, installation instructions and general recommendations for each specified flashing material and fabricated product.
- C. Shop Drawing: Each item specified to show layout, profile, methods of joining, and anchorage details.
- D. Samples: Submit samples of all sheet metal flashing, trim and accessory items, in the specified finish. Where finish involves normal color and texture variations, include sample sets composed of two (2) or more units showing the full range of variations expected.
 - 1. 8" square samples of specified sheet materials to be exposed as finished surfaces formed in field.

2. 12" long sample of factory-fabricated products exposed as finished work. Provide complete with specified factory finish.

1.6 - WARRANTY

- A. Provide two (2) year warranty on materials and workmanship.

PART 2 - PRODUCTS

2.1 - FLASHING AND SHEET METAL MATERIALS

- A. Sheet metal flashings, hook strips, concealed splice plates as indicated on the drawings: Minimum 0.040 min. inch thick aluminum with mill finish.
- B. Color - Finish shall be Kynar as selected from manufacturer's standard color selection. Where flashing and sheet metal systems cannot be seen mill finish is acceptable. Flashing and sheet metal items that are visible will match the color of the gutter and leader system. The Architect shall approve all color selections, materials and thickness.

2.2 - ACCEPTABLE MANUFACTURERS

- A. Sheet Metal Aluminum Flashing and Counterflashing: Minimum 0.040 min. inch thick aluminum. Color: As selected from manufacturer's full standard palette.
 1. Fry Reglet
 2. Cheney
 3. Keystone
- B. Formed-Aluminum Fascia: Minimum 0.040 inch thick aluminum. Color: As selected from manufacturer's full standard palette. Include water dams formed from galvanized steel, anchor plates, cleats or other attachment devices, concealed splice plates and trim or other accessories needed for complete installation with no exposed fasteners.
 1. Metal Era
 2. W.P. Hickman Co.
 3. Merchant and Evans, Inc.

2.3 - ACCESSORIES

- A. Exposed Fasteners: Stainless steel, nonmagnetic, of manufacturer's standard type and size for product and application indicated. Match finish of exposed heads with material being fastened to.
- B. Concealed Fasteners: Same metal as item fastened or other noncorrosive metal as recommended by manufacturer.
- C. Asphalt Mastic: SSPC-Paint 12, solvent-type asphalt, mastic, nominally free of sulfur and containing no asbestos fibers, compounded for 15-mil dry film thickness per coat.
- D. Mastic Sealant: Polyisobutylene; nonhardening, nonskinning, nondrying, nonmigrating sealant.
- E. Foam-Rubber Seal: Manufacturer's standard foam.

3.1 - INSTALLATION REQUIREMENTS

- A. All sheet metal work to be installed in conformance with the Architectural Sheet Metal Manual, latest edition, as produced by Sheet Metal and Air Conditioning National Association, Inc. (SMACNA).

3.2 - CLEANING AND PROTECTION

- A. Protection: Protect flashings during construction to ensure that work will be without damage or deterioration, other than natural weathering at time of substantial completion.

END OF SECTION 07600

SECTION 07900
SEALANTS

PART 1 - GENERAL

1.1 - RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special Conditions, and Division 1 Specification sections, apply to work specified in this section.

1.2 - WORK INCLUDED

- A. Caulk all openings in exterior walls, including doors, windows, mechanical openings, and control joints and elsewhere as shown. Caulk both inside and outside.
- B. The required interior applications of sealant work include, but are not necessarily limited to the following general locations:
 - 1. Sound sealed and waterproof joints.
 - 2. Joints between wood frames or wood trim and other finished surfaces.

1.3 - SUBMITTALS

- A. See Section 01400.
- B. Submit manufacturer's color charts for color selection.

1.4 - DELIVERY, STORAGE AND HANDLING

- A. Do not retain at the job site material which has exceeded the shelf life recommended by its manufacturer.

1.5 - PROJECT/SITE CONDITIONS

- A. Apply sealants only to dry surfaces.
- B. Do not apply sealants when temperature is below 40 degrees F. or less than 46 degrees

F. and falling.

PART 2 - PRODUCTS

2.1 - MATERIALS

- A. General Exterior sealant: 1-Part type silicone joint sealant complying with Federal Specification TT-S-001543A, Dow Corning 790 Silicone Building Sealant. Equal products by Pecora or General Electric are also acceptable. Color: As selected by the Owner's Representative.
- B. Sealant for use in filling interior cracks at new window, window trim, stools, etc.: Acrylic Latex Caulk (ASTM C384) suitable for painting. Color: white.
- C. In all applications, provide and install sealants which are designed specifically for the particular application and guaranteed by the manufacturer for such use.
- D. Joint Backing: Rod stock compatible with sealant being used, size as required.

PART 3 - EXECUTION

3.1 - INSPECTION

- A. Prior to application of sealants, the Contractor shall examine the surfaces of the work to which sealants will be applied. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.2 - PREPARATION

- A. Bonding surfaces on both new and remedial jobs must be clean, dust and frost free. Solvent wipe the surfaces using a clean oil-free rag saturated with solvent compatible with surface being cleaned, as recommended by sealant manufacturer. Do not flood surfaces with more solvent than necessary.
- B. Do not clean surfaces with soap, detergent or any water-based cleaner. Make sure that apparently clean surfaces are not covered with a thin film of construction dust.

3.3 - APPLICATION

- A. Apply joint backing to joints open in back or over 1/2" deep. Compress backing so as to form a firm stop which will resist sealant pressure.
- B. Sealants shall be installed with either a hand operated or air-operated caulking gun with sufficient pressure to completely fill voids and joints solidly. Extreme care shall be taken to prevent smearing onto adjacent surfaces. Material shall be heated as recommended by the manufacturer. Joints shall have a neat, uniform, slightly concave appearance.
- C. All sealant work shall strictly conform to the sealant manufacturer's technical instructions for surface preparation and application procedures to accomplish a weathertight seal.
- D. Tool joints within 10 minutes of application. If masking tape is used, remove tape before a surface skin begins to form.
- E. After applying the sealant and after a "skin" has formed, do not disturb the joint for 48 hours.
- F. Do not use silicone sealant in contact with "Azek" or other PVC fabrications.

3.4 - REMEDIAL WORK AND LIMITATIONS

- A. Should sealant not completely fill or fully adhere to intended surfaces on first pass, remove bead and reapply. Do not apply successive beads to fill opening or obtain adhesion.
- B. If cleaning solvents stain, abrade, or otherwise damage adjacent materials or surfaces, all repair, replacement, etc. shall be performed at no additional cost.

3.5 - CLEAN UP

- A. Completely remove excesses, spillage, "tails", and properly dispose of same; use solvents

recommended by manufacturer of sealant being applied.

- B. Select solvents that are compatible with surfaces being cleaned.

END OF SECTION 07900

SECTION 08500

WINDOWS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Casement windows.
 2. Glazing.
 3. Accessories.

1.2 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide products/systems that have been manufactured, fabricated, and installed to the following performance criteria:
1. Comply with ANSI/AAMA/NW/WDA 101/I.S.2.
 2. Performance Class: LC
 3. Performance Grade: PG70
 4. U-Factor (NFRC 100): .26
 5. Solar Heat Gain Coefficient (SHGC) (NFRC 200) : .34
 6. Outdoor-Indoor Transmission Class (OITC) (ASTM E90) : 26
 7. Sound Transmission Class (STC) (ASTM E90) :
- B. Structural Requirements: Provide products/systems capable of withstanding wind loads based on testing units representative of those indicated for Project that pass AAMA/NW/WDA 101/I.S.2/NAFS, Uniform Structural Load Test and are code compliant with the 2009 International Residential Code:
1. Design Wind Loads: Determine design wind loads applicable to Product from basic wind speed indicated in miles per hour (meters per second) at 33 feet (10 meters) above grade, according to ASCE, Section 6, based upon mean roof heights indicated on Drawings.
 - a. Basic Wind Speed: 105 MPH
 - b. Importance Factor: 2
 - c. Exposure Category: C
 - d. Wind Load Requirement: 30 PSF

- C. Large Missile Impact: Provide glazing systems capable of withstanding large missile impact and air pressure cycling without failure as required by the Large Missile Test for ASTM E 1996 or comparable test acceptable to authorities have jurisdiction.

1.3 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 01 Submittals Section.
- B. Product Data: Submit manufacturer's product data and installation guides.
- C. Shop Drawings: Provide drawings indicating direction of operable parts, typical jamb, head and sill conditions, and special mullion reinforcement details.
- D. Color Samples: Submit selection and verification samples, including the following:
 - 1. Hardware: Submit Sample indicating typical finish on hardware.
 - 2. Cladding: Submit color samples of exterior cladding.
- E. Quality Assurance/Control Submittals: Submit the following:
 - 1. Performance Data: Provide manufacturer's published performance data for specified products.
- F. Contract Closeout Submittals: Submit the following:
 - 1. Warranty documents specified herein.
 - 2. Owner's Manual: Bound manual clearly identified with project name, location, and completion date. Identify type and size of units installed. Provide recommendations for periodic inspections, care, and maintenance. Identify common causes of damage with instructions for temporary repair.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Utilize an installer having demonstrated experience on projects of similar size and complexity.
- B. Regulatory Requirements and Approvals: The Contractor shall adhere to all applicable local, State of CT and Federal rules, regulations and requirements.
- C. Certifications:
 - 1. Insulating Glass Units: Provide insulating glass units permanently marked with certification label of Insulating Glass Certification Council (IGCC) indicating compliance with ASTM E2190.

- D. Windborne-Debris Resistance: Provide glazed units capable of resisting impact from windborne debris, based on pass/fail criteria as determined from testing glazed units per ASTM E1886 and ASTM E1996.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. General: Comply with Division 01 Product Requirements Section.
- B. Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- C. Delivery: Deliver materials in manufacturer's original unopened, undamaged containers with identification labels intact.
- D. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.
- E. Store materials and accessories off ground, under cover, and protected from weather and construction activities.

1.6 PROJECT CONDITIONS

- A. Field Measurements: Verify actual dimension of openings by field measurement before fabrication. Record measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.
- B. Install units in strict accordance with manufacturer's safety and weather recommendations.

1.7 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project Warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard limited warranty document. Manufacturer's limited warranty is in addition to, and not a limitation of, other rights Owner may have under contract documents.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Provide products equal to those from the following manufacturer:

1. Andersen Windows, Inc.
100 4th Ave. N.
Bayport, MN 55003-1096.
Phone: (800) 299-9029.
Fax: (800) 752-9230.

2.2 MANUFACTURED UNITS

- A. Wood Windows:
 1. Andersen® 400 Series Casement Windows.
 2. Substitutions shall be limited to those manufacturers listed below.
 - a. Marvin Window & Door Company
 - b. Pelle Corporation
 - c. Jeld-wen Corporation

2.3 MATERIALS

- A. Frame and Sash: Fabricated from wood species approved in WDMA Industry Standard I.S.2.
- B. Vinyl Cladding: Rigid vinyl (PVC) complying with requirements of ASTM D4216, in the following color:
 1. Color: To be selected from manufacturer's standard line.
- C. Weatherstripping:
 1. Venting Sash: Weatherstripped with the following material:
 - a. Flexible EPDM foam
- D. Interior Stops:
 1. White painted wood.

2.4 GLAZING

- A. General: Insulating glass units certified through the Insulating Glass Certification Council as conforming to the requirements of IGCC. Provide dual sealed units consisting of polyisobutylene primary seal and silicone secondary seal. Provide metal spacers with bent or soldered corners.

B. Insulating Impact Resistant Glass:

1. Glass: Insulating glass units consisting of an outboard lite of clear annealed glass conforming to ASTM C1036, Type 1, Class 1, q3 and a laminated inboard lite of cleared annealed glass conforming to ASTM C1036, Type 1, Class 1, q3, Kind LA, laminate with a 0.090 inch (2.29 mm) SentryGlas® Plus interlayer.
2. Magnetron sputtering vapor deposition (MSVD) TiO₂ coating applied to the No. 1 surface.
3. High-Performance™ Low-E4™ Coating: Magnetron sputtering vapor deposition (MSVD) Low-E coating applied to the No. 2 surface.
4. Filling: Fill space between glass lites with argon gas blend.
5. Protective removable polyolefin film applied to glass surfaces No. 1 and No. 4.

2.5 HARDWARE

A. Venting Casement Hardware:

1. Hardened steel operator arm stamped with a gear ring. Set arm gear between nylon bushing and nylon spacer. Encase drive shaft and worm gear assemblies in zinc die cast base and removable polycarbonate cover.
 - a. Maximum Clear Opening Dimensions in Full Open Position:
 - 1) Units with Split Arm Operator:
 - a) C Series: 14-7/16 inch (367 mm).
 - 2) Units with Straight Arm Operator:
 - a) CW Series: 22-5/16 inch (567 mm).
2. Hinges: Stainless steel and heavy gauge steel arms. Stainless steel reinforcing insert in low friction shoe for rectangle units. 2-knuckle stainless steel butt hinges for shaped units. Apply hinges to venting sash indicated on Drawings.
3. Operator Handle and Covers:
 - a. Andersen Classic™ zinc die cast handle with powder coated painted finish and polycarbonate operator cover with integral color in the following finish.
 - 1) Style: Standard.
 - 2) Color: White
4. Lock Handle and Bezel: Universal lock handle of die cast zinc with powder coated paint finish and polycarbonate bezel with the following integral color:
 - a. Color: White

5. Sash Locks: Single actuation lock concealed by trim stops. Die cast zinc, galvanized steel link and engineered polymer components.
6. Sash Stiffener: Prefinished aluminum sash stiffeners for impact resistant units over 54 inches (1372 mm) tall.
7. Full Length Exterior Snugger: Provide full height prefinished aluminum exterior snugger for ventilating impact resistant units.
8. Corrosion Resistant Hardware:
 - a. Hinges: 304 stainless steel arms and track; 302 stainless steel rivets and screws; and 301 stainless steel shoe insert.
 - b. Operators: 304 stainless steel gear arm link and clip; 302 stainless steel gear arm rivet; Zinc plated steel bottom plate. Other parts plated and powder coated steel or zinc.

2.6 JOINING SYSTEMS

SPECIFIER NOTE: ANDERSEN WINDOWS STRONGLY RECOMMENDS CONSULTATION WITH AN EXPERIENCED STRUCTURAL ENGINEER, ARCHITECT, OR CONTRACTOR AND A LOCAL ANDERSEN REPRESENTATIVE WHEN SPECIFYING ANDERSEN JOINING SYSTEMS. CONSULT AN ANDERSEN REPRESENTATIVE FOR JOINING OPTIONS WHEN JOINING IMPACT RESISTANT WINDOW PRODUCTS.

- A. Fasteners: Corrosion resistant screws and bolts as provided by window manufacturer for fastening reinforcement members to wood frame and fastening end brackets to reinforcement members. Other fasteners provided by window installer.
- B. Provide silicone sealant recommended by window manufacturer.
- C. Provide vinyl trim strips as recommended by window manufacturer for each joining method used.
 1. Color: Match window unit exterior color.
- D. Provide Head Flashing: 6 inch (152 mm) long sheet vinyl.
 1. Color: Match window unit exterior color.
- E. Jamb clips: Stainless steel.
- F. Inside Mull Casing: Provide mull casings in the following species.
 1. Casing Species: Prefinished White.

2.7 ACCESSORIES

- A. Insect Screens: Provide venting sash with an insect screen, including attachment hardware.
 - 1. Frames: 0.024 inch (0.61 mm) rolled aluminum frame with chromate conversion coating. Provide matching corner locks and latch retainers.
 - a. Insect Screen Cloth: 18 by 16 aluminum mesh, gunmetal finish.
 - b. Frame Finish: High-bake polyester finish in the following color:
 - 1) Frame Finish: White.
- B. Exterior Trim and Casing: Where indicated on Drawings, provide 3/4 inch (19 mm) vinyl sheathed plywood conforming to NIST Voluntary Product Standards PS1 and rigid vinyl channels.
 - 1. Color: Match window framing.
 - 2. Andersen® Vinyl Trim Board: 0.043 inch (1.09 mm) thick vinyl with lightly textured surface laminated with adhesive to 3/4 inch (19.1 mm) thick plywood.
 - a. Trim Channels: Rigid vinyl extrusions supplied by window manufacturer for use on same product line.
- C. Extension Jamb: Wood members machined from clear material or veneered finger joined clear material approved in WDMA Industry Standard I.S.4. Pre-drill extension jamb for application.

2.8 FABRICATION

- A. Preservative Treatment: Treat wood frame members after machining with a water repellent preservative in accordance with WDMA I.S.4.
- B. Vinyl Cladding:
 - 1. Sash Members: Completely encase sash members with seamless, 0.047 inch (1.19 mm) thick, rigid vinyl extrusions. Heat-weld corners.
 - 2. Frame Units: Clad frame units with preformed rigid vinyl to provide joint-free cover. Provide integral flanges of 0.040 inch (1.02 mm) vinyl. Bond sheathing to wood frame with vinyl-to-wood adhesive.
- C. Glazing: Factory glaze with high quality glazing sealant and snap-in rigid vinyl glazing bead.
- D. Factory-apply weatherstripping.
- E. Glazing Impact Resistant Units: Factory glaze with high performance glazing sealant as primary seal and removable interior wood stops. Backfill between glass edge and frame with

high performance sealant. Apply high performance glazing sealant as secondary seal at glass opening perimeter.

1. Color of Secondary Sealant: Match window unit.

PART 3 - EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

- A. Comply with the instructions and recommendations of the window manufacturer.

3.2 EXAMINATION

- A. Site Verification of Conditions: Verify that site conditions are acceptable for installation of units, including the following:
 1. Concrete surfaces are dry and free of excess mortar, rocks, sand, and other construction debris.
 2. Rough openings are square and dimensions are correct.
 3. Sill plates are level.
- B. Do not proceed with installation of units until unacceptable conditions are corrected.

3.3 INSTALLATION

- A. General:
 1. Remove unit components, parts, accessories, and installation guides from carton.
 2. Inspect unit components and verify that components are not damaged and that parts are included before disposing of carton.
 3. For Shop-Assembled Units: Shop-assemble multiple units before installation in accordance with manufacturer's installation guides.
 4. For Field-Assembled Units: Field-assemble multiple units before installation in accordance with manufacturer's installation guides.
- B. Interface With Other Work:
 1. Perform installation in accordance with Manufacturer's instructions.
 2. Install each unit level, plumb, square, true to line, without distortion, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction.
 3. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.

4. Install insulation in shim space around unit perimeter to maintain continuity of building insulation. Do not overfill.
5. Hold back exterior siding or other finish materials from edge of unit to allow for expansion and contraction and installation of proper joint sealant with backing materials. Seal perimeter of unit after exterior finish is applied per requirements of Division 07 "Joint Sealants" Section.
6. Finish interior units per requirements specified in related sections. Refer to, and comply with, additional requirements in manufacturer's installation guides.
7. Install optional hardware and unit accessories after cleaning.

C. Site Tolerances:

1. Adjust operation, insect screens, hardware, and accessories for a tight fit at contact points and weatherstripping for smooth operation and weathertight closure.

3.4 CLEANING

- A. Clean units using cleaning material and methods specifically recommended by window manufacturer.
- B. Remove excess sealants, glazing materials, dirt, and other substances.
- C. Avoid damaging protective coatings and finishes.
- D. Protect unit surfaces from masonry cleaning solution that could damage insulation glass panels or hardware.
- E. Remove debris from work site and properly dispose of debris.

3.5 PROTECTION

- A. Protect installed work from damage due to subsequent construction activity on the site.

END OF SECTION

SECTION 09250 GYPSUM WALLBOARD

PART 1 - GENERAL

1.1 - RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special Conditions, and Division 1 Specification sections, apply to work specified in this Section.

1.2 - RELATED WORK SPECIFIED ELSEWHERE

- A. Rough framing is specified in Section 06100.
- B. Painting is specified in Section 09900.

PART 2 - PRODUCTS

2.1 - ACCEPTABLE MANUFACTURERS

- A. In general, specified products and systems are by U.S. Gypsum Co. Equivalent products and systems by National Gypsum Co., & Celotex Corp. are also acceptable.

2.2 - MATERIALS

- A. Gypsum Board: ASTM C36-78, tapered edge and square edge gypsum board. Where indicated, use water-resistant gypsum board, or fire rated gypsum board. Board thickness shall match existing.
- B. Edge & corner beads, and other required accessories:
 - 1. Corner beads: Paper covered metal type, equal to USG "Bead-X".

2. Casings: Vinyl concealed type typically, equal to U.S.G. P-1, abutting windows or at intersections of gypsum wallboard to dissimilar materials. No casings shall be exposed. Metal type may be used at locations not subject to wetness or condensation.
- C. Drywall screws:
1. For fastening gypsum board only to wood studs, use type S bugle head screws with rust resistant finish meeting ASTM C1002 in length recommended by manufacturer. Use galvanized screws with WR-GWB.
 2. For fastening gypsum wall board and any combination of cement board or plywood to wood studs, use type S-12 bugle head screws. Use galvanized screws with WR-GWB.
- D. Tape, compound and other required products:
1. Standard products by manufacturer of gypsum board.
- E. Acoustical Insulation: Unfaced fiberglass or mineral wool batts meeting the requirements of F.S. HH-521E, type 1, thickness as shown on the Drawings.
- F. Acoustical Sealant: Butyl rubber base or water base acoustical sealant manufactured for the purpose by U.S. Gypsum Co. or approved equal.
- G. Other Materials:
1. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor from the gypsum board manufacturer's list of recommended or acceptable products.

PART 3 - EXECUTION

3.1 - SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.2 - INSTALLATION

- A. If U.S. Gypsum products are used, install gypsum drywall according to "Gypsum Drywall Construction Handbook", latest edition, published by U.S. Gypsum Company. Also, conform to the requirements of ASTM C840 and Gypsum Association GA-216-96, Application and Finishing of Gypsum Board. Also conform to the requirements and recommendations of Gypsum Association GA-600-97, Fire Resistance Design Manual, Sound Control, Gypsum Systems, including Section III, Requirements for Fire Protection, and Section IV, Sound Control. Also conform to gypsum drywall system manufacturer's standards. Note that these designs stipulate use of acoustical insulation for certain designs and acoustical sealant at perimeter of walls and penetrations through walls, for all sound-rated construction. If specified standards require control joints not shown on the Drawings, notify Architect and install control joints at locations selected by Architect. Do not use water resistant gypsum board on ceilings. Do not use nails at any time.
- B. Use double studs at door and window jambs. Fasten multiple framing members securely together.
- C. Make fire-rated partitions continuous from slab or from top of floor deck to bottom of floor or roof deck above.
- D. Use tapered-edge gypsum board for finish surfaces; use square-edge for backing board. Fasten gypsum board to all studs as per manufacturer's recommendations.
- E. Use casing beads at all butt transitions to dissimilar materials and/or as detailed on Drawings. Compound, tape and compound over bead. Feather out for smooth finish surface. Completely conceal bead.

- F. Use acoustical sealant in gypsum board unit separation walls to seal all cut-outs and all intersections with adjoining walls, ceiling, and floors.
- G. Finish fasteners and joints with drywall compound and tape. Apply at least 3 coats of compound over tape and heads of screws. Conform to the requirements of Gypsum Association Publications GA-214, Levels of Gypsum Board Finish, and GA-216-96, Application and Finishing of Gypsum Board. Unless specified otherwise, the level of gypsum board finish shall be Level 4.

3.3 - CLEANING UP

- A. In addition to other requirements for cleaning, use necessary care to prevent tracking gypsum and joint finishing compound onto floor surfaces.

END OF SECTION 09250

SECTION 09900

PAINTING

PART 1 - GENERAL

1.1 - RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special Conditions, and Division 1 Specification sections, apply to work specified in this Section.

1.2 - WORK INCLUDED

- A. Paint all exposed new GWB walls and ceilings, previously painted interior surfaces (window stops, trim, stools, etc.) disturbed by the work of this Contract.
- B. Paint all new interior surfaces of gypsum wallboard replaced or repaired as part of the base bid and as included as unit price work. Painting of all gypsum wallboard repair/replacement shall lap existing painted surfaces by a minimum of two feet. If the repair/replacement is within two feet of an adjacent wall, painting shall extend to the corner or wall breakpoint.

1.3 - DELIVERY, STORAGE & HANDLING

- A. Deliver all products to job site in manufacturers' unopened containers with seals unbroken and labels intact.
- B. Store products so as to minimize danger of fire and protect building surfaces from spills.

1.4 - PROJECT/SITE CONDITIONS

- A. Do not paint when temperature of air or surfaces being painted is below 40 degrees F. Do not apply epoxy paint when temperature of air or surfaces being painted is below 60 degrees F. Do not paint when atmosphere is damp, and do not paint when surfaces are damp, unless paint manufacturer states that paint is intended for such use.

- B. Do not paint unless lighting is adequate.
- C. Provide ventilation during painting and drying periods.

PART 2 - PRODUCTS

2.1 - MATERIALS

- A. Acceptable Manufacturers.
 - 1. Besides manufacturer listed herein, (PPG Industries, Inc. - Pittsburgh Paints), the following manufacturers are also acceptable:
 - a. Benjamin Moore Co.
 - b. Sherwin-Williams Co.
 - c. No other paint manufacturers will be accepted.
- B. Use zero VOC products of the types specified in schedule.
 - 1. If requested, submit formulations to Architect to demonstrate compliance with above requirements.
 - 2. Deliver all materials to job site in unopened containers, bearing names of manufacturer and contents.
- C. Quality of materials.
 - 1. Use first quality products of the types specified in schedule. "First quality" means best, most expensive line of professional quality paints produced by selected manufacturer.
 - a. If requested, submit formulations to Architect to demonstrate compliance with above requirements.
 - b. Deliver all materials to job site in unopened containers, bearing names of manufacturer and contents.
 - 2. Use thinners recommended by manufacturers. In general, use mineral spirits to thin oleoresinous paints.
 - a. Materials shall meet all requirements of ANSI Z66.1, "Specifications to Minimize Hazards to Children from Residual Surface Coating Materials".

2.2 - COLORS

- A. For interior surfaces, the Owner shall select colors from full range of standard ready-mixed and custom-mixed colors offered by supplying manufacturer.

- B. Concealed surfaces may be painted grey.

PART 3 - EXECUTION

3.1 - INSPECTION

- A. Examine all surfaces to receive paint.
 - 1. If surfaces are not fit to receive paint; scrape, brush, or remove unsatisfactory materials by mechanical means, then clean and prepare surfaces for painting operation. Follow manufacturer's instructions concerning surface suitability.
- B. The start of work on any surface shall constitute acceptance of the condition of that surface.

3.2 - PREPARATION

- A. Broom-clean entire area before painting.
- B. In general, clean surfaces to be painted.
- C. Scrape away loose paint and remove rust from all existing metal brick lintels. Notify Architect if, after preparation, structural integrity of any brick lintels appears to be in question.
- D. Sand and fill rough surfaces, which are not intended to be rough. Spackle interior holes and cracks. Putty fastener holes after applying prime coat.
- E. Seal knots and pitch spots. Wash sap and pitch from surface, and apply Western Pine Association Formula WP-578 sealer or equivalent as recommended by selected manufacturer.
- F. Protect adjacent surfaces and items. Remove or protect such items as electrical plates and hardware. After painting, reinstall items removed for protection.
- G. On galvanized metal products scheduled to be painted, remove factory applied stabilizers using solvent, brush blasting or chemical treatment as required.

3.3 - APPLICATION

- A. The specified number of coats of paint in the schedule is based on the assumption that quality of paint, opacity of pigments, and quality of workmanship will be good. If Contractor disputes scheduled systems, notify Owner's Representative in writing before starting the work.
- B. Use products as packaged, unless manufacturer specifically directs thinning or other alteration for proper application. Mix all products thoroughly before, and regularly during application.
- C. Follow manufacturer's directions for millage thickness application and rate of coverage.
- D. Apply paint evenly. Produce uniform surfaces. Avoid runs, sags, brush or roller marks, "holidays", differences in sheen or color, and other blemishes.
- E. If specified number of coats is not sufficient to satisfy requirements specified in D. above, as adjudged by Architect, apply additional coats as required to do so.
- F. Brush paint into cracks and seams. Cut straight, neat edges.
- G. Do not allow paint to get on adjacent surfaces. Clean up spills and spatters as soon as possible, and no later than end of same day.
- H. Allow each coat to dry as recommended by manufacturer before applying following coat.
- I. Between coats, trowel in place drywall compound to cover defects in surface and sand smooth to match adjacent surfaces. Reprime those areas.
- J. At substantial completion, all newly painted surfaces shall be clean. If painted surfaces cannot be uniform, rectify condition by cleaning, or repaint them in accordance with 3.2 and 3.3 of this specification section.

3.4 - SCHEDULE

- A. General
1. If shop-applied primer coat is in good condition, field prime coat is not required. Patch primer where scratched or abraded.
 2. If shop-applied finish coat is in good condition, and if it matches Architect's selected color, field finishing is not required. Patch where not smooth, uniform, and in tact.
- B. Paint all exposed interior surfaces except the following:
1. Items such as window glass, acoustical tile, ceramic tile, plastic laminates, and resilient flooring which are customarily not painted.
 2. Shop-finished items such as cabinets, window frames, and toilet partitions, except as required in A. above.
 3. Wood doors, wood trim, and architectural woodwork scheduled for transparent finish.
 4. Concrete floors and walls, except where schedule on the Drawings specifically calls for painted concrete floors or walls.
 5. Floor, wall, and ceiling surfaces listed in finish schedule not to be painted.
 6. Sealant.
- C. Schedule by surfaces. The following schedule is based on the products of Pittsburgh Paints as manufactured by PPG Industries, Inc. Minimum Wet Film (MWF) and Minimum Dry Film (MDF) are also designated. Equal products of other manufacturers listed in 2.1 above are also acceptable. Submit schedule to the Architect as required in 1.3 above. Primer coat may be deleted on previously painted surfaces.

1. Interior Gypsum Wallboard Surfaces:

Primer: 1 coat Speedhide Quick-drying Latex Primer-Sealer, 6-2. MWF
3.0 mils, MDF 1.0 mils per coat.

Finish: 2 coats Speedhide Eggshell Latex Enamel, 6-411 series. MWF
4.5 mils, MDF 1.6 mils per coat.

2. Interior Wood Trim scheduled for opaque finish:

Primer: 1 Coat Speedhide water base undercoater, 6-755. MWF 4.0
mils, MDF 1.5 mils per coat.

Finish: 2 coats Speedhide Semi-Gloss Latex Enamel, 6-510. MWF 4.0
mils, MDF 1.4 mils per coat.

3. Exterior Wood Trim:

Primer: 1 Coat Speedhide Exterior Latex Wood Primer, 6-609.
Provide required coverage per manufacturer's
recommendations.

Finish: 2-coats Sun-Proof Exterior House and Trim Satin Latex
100% Acrylic, 76-110. Provide required coverage per
manufacturer's recommendations.

4. Other Surfaces:

Follow master specification of selected paint manufacturer for three (3) coat
work in normal service area.

END OF SECTION 09900