



818 S. FLORES ST. ① SAN ANTONIO, TEXAS 78204 ① [www.saha.org](http://www.saha.org)

Procurement Department

---

## **REQUEST FOR QUOTATIONS**

**For**

**MOLD REMEDIATION AT  
1818 KROCKER WAY**

**For**

**HOUSING AUTHORITY OF THE  
CITY OF SAN ANTONIO, TEXAS  
AND  
AFFILIATED ENTITIES**

**Date Issued: December 19, 2011**

**RFQ #: 1111-926-78-3670**

**Closes January 6, 2012 @ 11:00 AM**

Prepared by:

**Department of Procurement  
of the  
San Antonio Housing Authority  
818 South Flores Street  
San Antonio, Texas 78204**

President and CEO..... Lourdes Castro Ramirez

December 2011

- 1.0 The Housing Authority of the City of San Antonio, Texas and its affiliated entities d/b/a San Antonio Housing Authority (“SAHA”) hereby invites independent Contractors to submit bids for mold remediation at 1818 Krockner Way. The mold remediation is required for the health and safety of residents, guests and staff as well as for preservation of property.**
- 2.0 SAN ANTONIO HOUSING AUTHORITY (SAHA) CONTACT: All questions pertaining to this quotation shall be addressed to Ian Montemayor, telephone 210-477-6582, fax 210-477-6167 or e-mail at [ian\\_montemayor@saha.org](mailto:ian_montemayor@saha.org).**
- 3.0 APPLICABILITY: By submitting a quote (hereinafter referred to as "bid") to SAHA, the firm or individual doing so (hereinafter, "the bidder") is automatically agreeing to abide by all terms and conditions listed herein, including those terms and conditions within the HUD Handbook 7460.8 REV 2, Procurement Handbook for Public Housing Agencies, dated 2/2007, HUD Table 5.1, Mandatory Contract Clauses for Small Purchases Other Than Construction, HUD5370EZ, and the Davis Bacon Wage Decision. These documents may be obtained by contacting Ian Montemayor, telephone 210-477-6582, fax 210-477-6167 or e-mail at [ian\\_montemayor@saha.org](mailto:ian_montemayor@saha.org).**

**ATTACHMENT A: HUD5370EZ**

**ATTACHMENT B: Davis Bacon Wage Decision**

**ATTACHMENT C: Specifications**

- 4.0 SAHA’s RESERVATION OF RIGHTS: SAHA reserves the right to:**
  - 4.1 Reject any or all bids, to waive any informalities in the Solicitation process, or to terminate the Solicitation process at any time, if deemed by SAHA to be in the best interest of SAHA.**
  - 4.2 Terminate a contract awarded pursuant to this Solicitation at any time for its convenience upon delivery of a 14-day written notice to the apparent or successful bidder.**
  - 4.3 Determine the days, hours and locations that the successful bidder shall provide the items or services called for in this Solicitation.**
  - 4.4 Reject and not consider any bid that does not, in the opinion of SAHA, meet the requirements of this Solicitation, including but not necessarily limited to incomplete bids and/or bids offering alternate (not including “or equal” items) or non-requested items or services.**
  - 4.5 SAHA reserves the right to:**
    - 4.5.1 To make an award to the same bidder (aggregate) for all items; or,**
    - 4.5.2 To make an award to multiple bidders for the same or different items.**

- 5.0 BIDDER'S RESPONSIBILITY:** Each bidder must carefully review and comply with all instructions provided herein, or provided within any named attachments.
- 6.0 DEADLINE:** Each bidder shall submit his/her proposed costs, prior to the posted deadline, where provided herein. Whereas this is an informal solicitation process, SAHA reserves the right to extend the posted deadline at any time prior to the deadline, if, in the opinion of SAHA, it is in the best interests of SAHA.
- 7.0 HOLD PRICES/NON-ESCALATION:** By submitting a bid, each bidder thereby agrees to "hold" or not increase the proposed bid prices for a minimum period of ninety (90) days with no escalation. Quantities listed in this Solicitation are for the purpose of determining best pricing per line item.
- 8.0 Method of Award:** SAHA may, at its sole discretion, procure the applicable goods or services by issuance of a PO or execution of a Contract. By submitting a bid, the successful proposer agrees to accept the PO or execute the contract.
- 9.0 Fees:** All fees are all-inclusive of all related costs that a proposer will incur to provide the noted services in compliance with this RFQ, including, but not limited to: employee wages and benefits, clerical support, travel and lodging, overhead, profit, licensing, insurance, materials, supplies, tools, equipment, long distance telephone calls, document copying and motor vehicle fuel, fully burdened.
- 10.0 AWARD CRITERIA:** If an award is completed pursuant to this Solicitation, and unless otherwise instructed by SAHA, an award shall be made to the responsive and responsible contractor that submits the best value to SAHA using price and other factors listed below.

Experience, Cost and Days to complete the project

- 11.0 BID COSTS:** There shall be no obligation for SAHA to compensate any bidder or prospective bidder for any costs that he/she may incur in responding to this Solicitation.
- 12.0 ASSIGNMENT OF PERSONNEL:** SAHA retains the right to demand and receive a change in personnel assigned by the successful bidder to provide services to SAHA if SAHA believes that such change is in the best interest of SAHA and the completion of the work or provision of the items.
- 13.0 UNAUTHORIZED SUB-CONTRACTING PROHIBITED:** The successful bidder shall not assign any right, nor delegate any duty for the work proposed pursuant to this Solicitation (including, but not limited to, selling or transferring the ensuing PO or contract) without the prior written consent of SAHA. Any purported assignment of interest or delegation of duty, without the prior written consent of SAHA shall be void and may result in the cancellation of the PO or contract with SAHA.

**14.0 LICENSING REQUIREMENTS: By submitting a bid the successful bidder thereby certifies that he/she possess and will, prior to issuance of a PO by SAHA, present to SAHA, proof and/or certification of the following:**

**14.1 If applicable, local business license or permit issued by the City of San Antonio.**

**14.2 If applicable, a copy of the bidder's license issued by the State of Texas licensing authority allowing the bidder to provide the services or products as detailed herein.**

**15.0 SPECIFICATIONS /SCOPE OF WORK FOR THIS SOLICITATION:**

**15.1 Contractor shall comply with the attached mold remediation plan (#90117173) as well as all Federal, State, and local laws, regulations, ordinances, and codes and have current licenses or permits required to perform the services under this quote.**

**15.2 The contractor shall secure and pay for all permits, fees, and licenses required for the proper execution and completion of the work.**

**15.6 Responses shall include all cost to remediate all mold contaminated building materials from these units, as per the attached mold remediation plan and the estimated timeframe to complete the mold remediation cleanup.**

**15.7 All inspections shall be conducted by a licensed mold remediation inspector and appropriate local, State, or Federal regulatory personnel.**

**15.8 Any and all debris created by the repairs shall be disposed of off-site and in accordance with applicable local, State, and Federal laws and regulations.**

**15.9 Contractor shall use equipment and products that meet or exceed acceptable industry standards and in all cases meet or exceed the requirements of the local building codes.**

**15.10 Specifications are ATTACHMENT C: Specifications for Mold Remediation as it pertains to Cassiano Homes-1818 Krockner Way. Plan No. 90117173.**

**15.11 Contractor shall supply all material, equipment and labor to complete this project. All work must be in accordance with State of Texas code and best industry practices. Acceptance by SAHA is required prior to payment. Acceptance is based on meeting all codes.**

**15.12 Responses may be hand delivered to:**  
**San Antonio Housing Authority,**  
**Attn: Ian Montemayor,**  
**818 S. Flores, San Antonio, TX 78204, or**  
**Faxed to: Attn. Ian Montemayor at 210-477-6167 or**  
**Emailed to: [ian\\_montemayor@saha.org](mailto:ian_montemayor@saha.org)**

**16.0 INSURANCE: The following table details the standard liability policies with the required limits and waivers of subrogation required by SAHA of all contractors performing work on SAHA property.**

<b>Professional Liability</b>	<b>Required Limits</b>
SAHA and its affiliates must be named as an Additional Insured and be a Certificate Holder. This is required for vendors who render observational services to SAHA such as appraisers, inspectors, attorneys, engineers or consultants.	\$1,000,000
<b>Business Automobile Liability</b>	<b>Required Limits</b>
SAHA and its affiliates must be named as an additional insured and as the certificate holder. This is required for any vendor that will be using their vehicle to do work on SAHA properties.	\$500,000 combined single limit, per occurrence
<b>Workers Compensation and Employer's Liability</b>	<b>Required Limits</b>
Workers' Compensation coverage is Statutory and has no pre-set limits. Employer's Liability limit is \$500,000. Workers' Compensation is required for any vendor made up of more than one person. A Waiver of Subrogation in favor of SAHA must be included in the Workers' Compensation policy. SAHA and its affiliates must be a Certificate Holder.	Statutory \$500,000
<b>Commercial General Liability</b>	<b>Required Limits</b>
This is required for any vendor who will be doing hands on work at SAHA properties. SAHA and its affiliates must be named as an Additional Insured and as the Certificate Holder.	\$1,000,000 per accident \$2,000,000 aggregate

**17.0 Invoicing: Invoices shall be sent to: San Antonio Housing Authority, Accounts Payable, P.O. Box 830428, San Antonio, TX 78283-0428 or may be e-mailed to [AccountsPayable@saha.org](mailto:AccountsPayable@saha.org). Contractor shall invoice SAHA within 60 days after the delivery of the goods or service. If contractor fails to invoice within 60 days SAHA reserves the right to not pay the invoice. Upon the Award of Contract, Contractor shall receive a request from SAHA to process all payments electronically to insure prompt and efficient payment of all invoices.**

**18.0 WARRANTY: All services and goods provided pursuant to this RFQ and the resulting contract shall be covered by the most favorable commercial warranties given to any customer for same or similar supplies or services, but in any event such goods and services shall be warranted for at least a period of two (2) years.**

**19.0 Fair Labor Standards Act: Both parties hereby agree to comply with the provisions of the Fair Labor Standards Act (29 U.S.C. 201, et seq).**

**20.0 Davis-Bacon Act: For all construction contracts awarded in excess of \$2,000 when required by Federal Grant Program legislation, both parties hereby agree to**

comply with the Davis-Bacon Act (40 U.S.C. 276a to 276a-7) as supplemented in Department of Labor Regulations (29 CFR Part 5) and attached wage decision.

**21.0 Training and Employment Opportunities for Residents in the Project Area (Section 3, HUD Act of 1968; 24 CFR 135)**

(a) The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

(b) The parties to this contract agree to comply with HUD's regulations in 24 CFR Part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the Part 135 regulations.

(c) The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.

(d) The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR Part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR Part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR Part 135.

(e) The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR Part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR Part 135.

(f) Noncompliance with HUD's regulations in 24 CFR Part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

(g) In addition Contractor shall comply with SAHA Section 3 program, policy and procedures adopted on April 6, 2011 and any amendments.

**Quote Form**  
**RFQ #1108-926-78-3670**  
**Closes on January 6, 2012 at 11:00AM**

**1. Cost to remediate mold at 1818 Krockner Way: TOTAL BID \$ \_\_\_\_\_**  
**Delivery in \_\_\_\_\_ days**

**(Failure to enter a delivery date shall subject bidder to 7 days for completion)**

**1. Sub-Contractors: Proposer shall identify his sub-contractors if any:**

a) \_\_\_\_\_

b) \_\_\_\_\_

c) \_\_\_\_\_

Non-Collusive Affidavit: The undersigned party submitting this proposal hereby certifies that such bid is genuine and not collusive and 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, to fix overhead, profit or cost element of said bid price, or that of any other bidder or to secure any advantage against the SAHA or any person interested in the proposed contract; and that all statements in said bid are true.

**Initials** \_\_\_\_\_

In performing this contract, the contractor(s) shall comply with any and all applicable federal, state or local laws including but not limited to: Occupational Safety & Health, Equal Employment Opportunity, Immigration and Naturalization, The Americans with Disabilities Act, State Tax and Insurance Law, and the Fair Housing Act.

**Initials** \_\_\_\_\_

In submitting this bid, it is understood if written notice of the acceptance of this bid is mailed, e-mailed, or delivered to the undersigned within ninety (90) days after the opening thereof, or at any time thereafter before this bid is withdrawn, the undersigned agrees to execute and deliver the products and/or services described herein. By signature hereon the bidder certifies he has the right and authority to bind the company.

Submitted by: \_\_\_\_\_ Date: \_\_\_\_\_  
(Firm)

\_\_\_\_\_  
(Signature) (Printed name and title)

\_\_\_\_\_  
(Business address,)

\_\_\_\_\_  
(Phone) (E-mail)

### Proposers Certification

By signing below, Proposer certifies that the following statements are true and correct:

1. He/she has full authority to bind Proposer and that no member of Proposer's organization is disbarred, suspended or otherwise prohibited from contracting with any federal, state or local agency;
2. Items for which bids were provided herein will be delivered as specified in the bid,
3. Proposer proposes to furnish and deliver in accordance with the terms, conditions, and specifications embodied herein, all of which terms, conditions, and specifications are hereby accepted and made a part of this bid, all materials and supplies, which are described on the bid worksheets herein and opposite of which prices have been entered, at the price or prices quoted, subject to valid price reductions as hereafter defined, as ordered for delivery, by SAHA,
4. Proposer agrees that this bid shall remain open and valid for at least a period of 90 days from the date of the Bid Opening and that this bid shall constitute an offer, which, if accepted by SAHA and subject to the terms and conditions of such acceptance, shall result in a contract between SAHA and the undersigned Proposer,
5. He/she has not given, offered to give, nor intends to give at any time hereafter any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant in connection with this bid,
6. Proposer, nor the firm, corporation, partnership, or institution represented by the Proposer, or anyone acting for such firm, corporation or institution has violated the antitrust laws of the State of Texas or the Federal Antitrust laws, nor communicated directly or indirectly the bid made to any competitor or any other person engaged in such line of business,
7. Proposer has not received compensation for participation in the preparation of the specifications for this RFP, and
8. The individual or business entity named in this bid is eligible to receive the specified payment and acknowledges that this Contract may be terminated and payment may be withheld if this certification is inaccurate,

SIGNED: \_\_\_\_\_

\_\_\_\_\_  
(Print Name)

\_\_\_\_\_  
(Print Company Name)

\_\_\_\_\_  
(Company Phone & Fax & Email Address)

\_\_\_\_\_  
(Date)

# **ATTACHMENT A**

**HUD 5370 EZ**

# General Contract Conditions for Small Construction/Development Contracts

U.S. Department of Housing and Urban Development  
Office of Public and Indian Housing  
OMB Approval No. 2577-0157 (exp. 12/31/2011)

**Applicability.** The following contract clauses are applicable and must be inserted into small construction/development contracts, greater than \$2,000 but not more than \$100,000.

## 1. Definitions

Terms used in this form are the same as defined in form HUD-5370

## 2. Prohibition Against Liens

The Contractor is prohibited from placing a lien on the PHA's property. This prohibition shall apply to all subcontractors at any tier and all materials suppliers. The only liens on the PHA's property shall be the Declaration of Trust or other liens approved by HUD.

## 3. Disputes

- (a) Except for disputes arising under the **Labor Standards** clauses, 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.
- (b) All claims by the Contractor shall be made in writing and submitted to the Contracting Officer for a written decision. A claim by the PHA against the Contractor shall be subject to a written decision by the Contracting Officer.
- (c) The Contracting Officer shall, within 30 days after receipt of the request, decide the claim or notify the Contractor of the date by which the decision will be made.
- (d) The Contracting Officer's decision shall be final unless the Contractor (1) appeals in writing to a higher level in the PHA in accordance with the PHA'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 days after receipt of the Contracting Officer's decision.
- (e) 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.

## 4. Default

- (a) If the Contractor refuses or fails to prosecute the work, or any separable part thereof, with the diligence that will insure its completion within the time specified in this contract, or any extension thereof, or fails to complete said work within this time, the Contracting Officer may, by written notice to the Contractor, terminate the right to proceed with the work (or separable part of the work) that has been delayed. In the event, the PHA may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, equipment, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the PHA resulting from the Contractor's refusal or failure to complete the work within the specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the PHA in completing the work.

- (b) The Contractor's right to proceed shall not be terminated or the Contractor charged with damages under this clause if –
  - (1) The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor; and
  - (2) The Contractor, within 10 days from the beginning of such delay notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer shall ascertain the facts and the extent of the delay. If, in the judgment of the Contracting Officer, the findings of Fact warrant such action, time for completing the work shall be extended by written modification to the contract. The findings of the Contracting Officer shall be reduced to a written decision which shall be subject to the provisions of the **Disputes** clause of this contract.
- (c) If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligation of the parties will be the same as if the termination had been for convenience of the PHA.

## 5. Termination for Convenience

- (a) The Contracting Officer may terminate this contract in whole, or in part, whenever the Contracting Officer determines that such termination is in the best interest of the PHA. Any such termination shall be effected by delivery to the Contractor of a Notice of Termination specifying the extent to which the performance of the work under the contract is terminated, and the date upon which such termination becomes effective.
- (b) If the performance of the work is terminated, either in whole or in part, the PHA shall be liable to the Contractor for reasonable and proper costs resulting from such termination upon the receipt by the PHA of a properly presented claim setting out in detail: (1) the total cost of the work performed to date of termination less the total amount of contract payments made to the Contractor; (2) the cost (including reasonable profit) of settling and paying claims under subcontracts and material orders for work performed and materials and supplies delivered to the site, payment for which has not been made by the PHA to the Contractor or by the Contractor to the subcontractor or supplier; (3) the cost of preserving and protecting the work already performed until the PHA or assignee takes possession thereof or assumes responsibility therefore; (4) the actual or estimated cost of legal and accounting services reasonably necessary to prepare and present the termination claim to the PHA; and (5) an amount constituting a reasonable profit on the value of the work performed by the Contractor.
- (c) The Contracting Officer will act on the Contractor's claim within days (60 days unless otherwise indicated) of receipt of the Contractor's claim.
- (d) Any disputes with regard to this clause are expressly made subject to the provisions of the Disputes clause of this contract.

## 6. Insurance

- (a) Before commencing work, the Contractor and each subcontractor shall furnish the PHA with certificates of insurance showing the following insurance is in force and will insure all operations under the Contract:

(1) Workers' Compensation, in accordance with state or Territorial Workers' Compensation laws.

(2) Commercial General Liability with a combined single limit for bodily injury and property damage of not less than \$1,000,000 per occurrence to protect the

Contractor and each subcontractor against claims for bodily injury or death and damage to the property of others. This shall cover the use of all equipment, hoists, and vehicles on the site(s) not covered by Automobile Liability under (3) below. If the Contractor has a "claims-made" policy, then the following additional requirements apply: the policy must provide a "retroactive date" which must be on or before the execution date of the Contract; and the extended reporting period may not be less than five years following the completion date of the Contract.

(3) Automobile Liability on owned and non-owned motor vehicles used on the site(s) or in connection therewith for a combined single limit for bodily injury and property damage of not less than \$500,000 per occurrence.

(b) Before commencing work, the Contractor shall furnish the PHA with a certificate of insurance evidencing that Builder's Risk (fire and extended coverage) Insurance on all work in place and/or materials stored at the building site(s), including foundations and building equipment, is in force. The Builder's Risk Insurance shall be for the benefit of the Contractor and the PHA as their interests may appear and each shall be named in the policy or policies as an insured. The Contractor in installing equipment supplied by the PHA shall carry insurance on such equipment from the time the Contractor takes possession thereof until the Contract work is accepted by the PHA. The Builder's Risk Insurance need not be carried on excavations, piers, footings, or foundations until such time as work on the superstructure is started. It need not be carried on landscape work. Policies shall furnish coverage at all times for the full cash value of all completed construction, as well as materials in place and/or stored at the site(s), whether or not partial payment has been made by the PHA. The Contractor may terminate this insurance on buildings as of the date taken over for occupancy by the PHA. The Contractor is not required to carry Builder's Risk Insurance for modernization work which does not involve structural alterations or additions and where the PHA's existing fire and extended coverage policy can be endorsed to include such work.

(c) All insurance shall be carried with companies which are financially responsible and admitted to do business in the State in which the project is located. If any such insurance is due to expire during the construction period, the Contractor (including subcontractors, as applicable) shall not permit the coverage to lapse and shall furnish evidence of coverage to the Contracting Officer. All certificates of insurance, as evidence of coverage, shall provide that no coverage may be canceled or non-renewed by the insurance company until at least 30 days prior written notice has been given to the Contracting Officer.

## 7. Contract Modifications

(a) Only the Contracting Officer has authority to modify any term or condition of this contract. Any contract modification shall be authorized in writing.

(b) The Contracting Officer may modify the contract unilaterally (1) pursuant to a specific authorization stated in a contract clause (e.g., Changes); or (2) for administrative matters which

do not change the rights or responsibilities of the parties (e.g., change in the PHA address). All other contract modifications shall be in the form of supplemental agreements signed by the Contractor and the Contracting Officer.

(c) When a proposed modification requires the approval of HUD prior to its issuance (e.g., a change order that exceeds the PHA's approved threshold), such modification shall not be effective until the required approval is received by the PHA.

## 8. Changes

(a) The Contracting Officer may, at any time, without notice to the sureties, by written order designated or indicated to be a change order, make changes in the work within the general scope of the contract including changes:

(1) In the specifications (including drawings and designs);

(2) In the method or manner of performance of the work;

(3) PHA-furnished facilities, equipment, materials, services, or site; or,

(4) Directing the acceleration in the performance of the work.

(b) Any other written order or oral order (which, as used in this paragraph (b), includes direction, instruction, interpretation, or determination) from the Contracting Officer that causes a change shall be treated as a change order under this clause; provided, that the Contractor gives the Contracting Officer written notice stating (1) the date, circumstances and source of the order and (2) that the Contractor regards the order as a change order.

(c) Except as provided in this clause, no order, statement or conduct of the Contracting Officer shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment.

(d) If any change under this clause causes an increase or decrease in the Contractor's cost of, or the time required for the performance of any part of the work under this contract, whether or not changed by any such order, the Contracting Officer shall make an equitable adjustment and modify the contract in writing. However, except for a adjustment based on defective specifications, no proposal for any change under paragraph (b) above shall be allowed for any costs incurred more than 20 days (5 days for oral orders) before the Contractor gives written notice as required. In the case of defective specifications for which the PHA is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the Contractor in attempting to comply with the defective specifications.

(e) The Contractor must assert its right to an adjustment under this clause within 30 days after (1) receipt of a written change order under paragraph (a) of this clause, or (2) the furnishing of a written notice under paragraph (b) of this clause, by submitting a written statement describing the general nature and the amount of the proposal. If the facts justify it, the Contracting Officer may extend the period for submission. The proposal may be included in the notice required under paragraph (b) above. No proposal by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this contract.

(f) The Contractor's written proposal for equitable adjustment shall be submitted in the form of a lump sum proposal supported with an itemized breakdown of all increases and decreases in the contract in at least the following details:

(1) Direct Costs. Materials (list individual items, the quantity and unit cost of each, and the aggregate cost); Transportation and delivery costs associated with materials; Labor

breakdowns by hours or unit costs (identified with specific work to be performed); Construction equipment exclusively necessary for the change; Costs of preparation and/ or revision to shop drawings resulting from the change; Worker's Compensation and Public Liability Insurance; Employment taxes under FICA and FUTA; and, Bond Costs - when size of change warrants revision.

- (2) Indirect Costs. Indirect costs may include overhead, general and administrative expenses, and fringe benefits not normally treated as direct costs.
- (3) Profit. The amount of profit shall be negotiated and may vary according to the nature, extent, and complexity of the work required by the change.

The allowability of the direct and indirect costs shall be determined in accordance with the Contract Cost Principles and Procedures for Commercial Firms in Part 31 of the Federal Acquisition Regulation (48 CFR 1-31), as implemented by HUD Handbook 2210.18, in effect on the date of this contract. The Contractor shall not be allowed a profit on the profit received by any subcontractor. Equitable adjustments for deleted work shall include a credit for profit and may include a credit for indirect costs. On proposals covering both increases and decreases in the amount of the contract, the application of indirect costs and profit shall be on the net-change in direct costs for the Contractor or subcontractor performing the work.

- (g) The Contractor shall include in the proposal its request for time extension (if any), and shall include sufficient information and dates to demonstrate whether and to what extent the change will delay the completion of the contract in its entirety.
- (h) The Contracting Officer shall act on proposals within 30 days after their receipt, or notify the Contractor of the date when such action will be taken.
- (i) Failure to reach an agreement on any proposal shall be a dispute under the clause entitled Disputes herein. Nothing in this clause, however, shall excuse the Contractor from proceeding with the contract as changed.
- (j) Except in an emergency endangering life or property, no change shall be made by the Contractor without a prior order from the Contracting Officer.

## 9. Examination and Retention of Contractor's Records

The HA, HUD, or Comptroller General of the United States, or any of their duly authorized representatives shall, until three years after final payment under this contract, have access to and the right to examine any of the Contractor's directly pertinent books, documents, papers, or other records involving transactions related to this contract for the purpose of making audit, examination, excerpts, and transcriptions.

## 10. Rights in Data and Patent Rights (Ownership and Proprietary Interest)

The HA shall have exclusive ownership of, all proprietary interest in, and the right to full and exclusive possession of all information, materials, and documents discovered or produced by Contractor pursuant to the terms of this Contract, including but not limited to reports, memoranda or letters concerning the research and reporting tasks of this Contract.

## 11. Energy Efficiency

The Contractor shall comply with all mandatory standards and policies relating to energy efficiency which are contained in the energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub.L. 94-163) for the State in which the work under this contract is performed.

## 12. Procurement of Recovered Materials

- (a) In accordance with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, the Contractor shall procure items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition. The Contractor shall procure items designated in the EPA guidelines that contain the highest percentage of recovered materials practicable unless the Contractor determines that such items: (1) are not reasonably available in a reasonable period of time; (2) fail to meet reasonable performance standards, which shall be determined on the basis of the guidelines of the National Institute of Standards and Technology, if applicable to the item; or (3) are only available at an unreasonable price.
- (b) Paragraph (a) of this clause shall apply to items purchased under this contract where: (1) the Contractor purchases in excess of \$10,000 of the item under this contract; or (2) during the preceding Federal fiscal year, the Contractor: (i) purchased any amount of the items for use under a contract that was funded with Federal appropriations and was with a Federal agency or a State agency or agency of a political subdivision of a State; and (ii) purchased a total of in excess of \$10,000 of the item both under and outside that contract.

## 13. Training and Employment Opportunities for Residents in the Project Area (Section 3, HUD Act of 1968; 24 CFR 135)

- (a) The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.
- (b) The parties to this contract agree to comply with HUD's regulations in 24 CFR Part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the Part 135 regulations.
- (c) The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the

---

qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.

- (d) The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR Part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR Part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR Part 135.
- (e) The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR Part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR Part 135.
- (f) Noncompliance with HUD's regulations in 24 CFR Part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

#### **14. Labor Standards - Davis-Bacon and Related Acts**

##### **(a) Minimum Wages.**

(1) All laborers and mechanics employed under this contract in the construction or development of the project(s) involved will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the regular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits in the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein; provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in

a prominent and accessible place where it can be easily seen by the workers.

- (2) (i) Any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when all the following criteria have been met:
  - (a) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
  - (b) The classification is utilized in the area by the construction industry; and
  - (c) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (ii) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employee Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary.
- (iii) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator of the Wage and Hour Division for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary.
- (iv) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (a)(2)(ii) or (iii) of this clause shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.
- (3) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
- (4) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part

---

of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program; *provided*, that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

- (b) **Withholding of Funds.** HUD or its designee shall, upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same prime Contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working in the construction or development of the project, all or part of the wages required by the contract, HUD or its designee may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the Contractor, disburse such amounts withheld for and on account of the Contractor or subcontractor to the respective employees to whom they are due.

(c) **Payrolls and Basic Records.**

- (1) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working in the construction or development of the project. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid. Whenever the Secretary of Labor has found, under 29 CFR 5.5(a)(1)(iv), that the wages of any laborer or mechanic include the amount of costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of

the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

- (2) (i) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Contracting Officer for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under subparagraph (c)(1) of this clause. This information may be submitted in any form desired. Optional Form WH-347 (Federal Stock Number 029-005-00014-1) is available for this purpose and may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. The prime Contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB Control Number 1214-0149.)
- (ii) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
- (A) That the payroll for the payroll period contains the information required to be maintained under paragraph (c)(1) of this clause and that such information is correct and complete;
- (B) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3; and
- (C) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
- (iii) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirements for submission of the "Statement of Compliance" required by subparagraph (c)(2)(ii) of this clause.
- (iv) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.
- (3) The Contractor or subcontractor shall make the records required under subparagraph (c)(1) available for inspection, copying, or transcription by authorized representatives of HUD or its designee, the Contracting Officer, or the Department of Labor and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(d) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services (OATELS), or with a State Apprenticeship Agency recognized by OATELS, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by OATELS or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in this paragraph, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator of the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event OATELS, or a State Apprenticeship Agency recognized by OATELS, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(e) **Trainees.** Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate

specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed in the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate in the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate in the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate in the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(f) **Equal Employment Opportunity.** The utilization of apprentices, trainees, and journeymen under this clause shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

(g) **Compliance with Copeland Act Requirements.** The Contractor shall comply with the requirements of 29 CFR Part 3, which are hereby incorporated by reference in this contract.

(h) **Contract Termination; Debarment.** A breach of the labor standards clauses in this contract may be grounds for termination of the contract and for debarment as a Contractor and a subcontractor as provided in 29 CFR 5.12.

(i) **Compliance with Davis-Bacon and related Act Requirements.** All rulings and interpretations of the Davis-Bacon and related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

(j) **Disputes Concerning Labor Standards.** Disputes arising out of the labor standards provisions of this clause shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the PHA, HUD, the U.S. Department of Labor, or the employees or their representatives.

(k) **Certification of Eligibility.**

(1) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded contracts by the United States Government by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(2) No part of this contract shall be subcontracted to any person or firm ineligible for award of a United States Government

---

contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(3) The penalty for making false statements is prescribed in the U. S. Criminal Code, 18 U.S.C. 1001.

(l) **Subcontracts.** The Contractor or subcontractor shall insert in any subcontracts all the provisions contained in this clause, and such other clauses as HUD or its designee may by appropriate instructions require, and also a clause requiring the subcontractors to include these provisions in any lower tier subcontracts. The prime Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all these provisions.

(m) **Non-Federal Prevailing Wage Rates.** Any prevailing wage rate (including basic hourly rate and any fringe benefits), determined under State law to be prevailing, with respect to any employee in any trade or position employed under the contract, is inapplicable to the contract and shall not be enforced against the Contractor or any subcontractor, with respect to employees engaged under the contract whenever such non-Federal prevailing wage rate exceeds:

- (i) the applicable wage rate determined by the Secretary of Labor pursuant to the Davis-Bacon Act (40 U.S.C. 3141 et seq.) to be prevailing in the locality with respect to such trade;
- (ii) an applicable apprentice wage rate based thereon specified in an apprenticeship program registered with the U.S. Department of Labor (DOL) or a DOL-recognized State Apprenticeship Agency; or
- (iii) an applicable trainee wage rate based thereon specified in a DOL-certified trainee program.

**ATTACHMENT B**  
**Davis Bacon Wage Decision**



-----

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

-----

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

---

END OF GENERAL DECISION

**ATTACHMENT C**  
**Specifications**

# Specifications for Remediation of Mold Contaminated Building Materials

Cassiano Homes – 1818 Krocker Way  
San Antonio, Texas

June 10, 2011

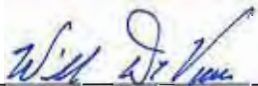
Terracon Project No. 90117173

**Prepared for:**

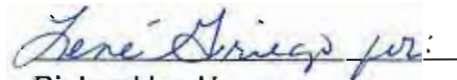
San Antonio Housing Authority  
818 South Flores  
San Antonio, Texas

**Prepared by:**

Terracon Consultants, Inc.  
6911 Blanco Road  
San Antonio, Texas 78216



**Will C. DeVeau**  
Mold Assessment Consultant  
TDSHS License No. MAC1173  
Expires 09/16/2012



**Richard Ian Howes**  
Mold Assessment Consultant  
TDSHS License No. MAC0112  
Expires 12/13/2011

Offices Nationwide  
Employee-Owned

Established in 1965  
terracon.com

# Terracon

Geotechnical ■ Environmental ■ Construction Materials ■ Facilities

## TABLE OF CONTENTS

<b>1.0 BACKGROUND</b> .....	<b>1</b>
<b>2.0 SCOPE OF WORK</b> .....	<b>3</b>
2.1 Mold Contaminated Materials .....	4
2.2 General Removal Procedures .....	5
<b>3.0 DESCRIPTION OF WORK</b> .....	<b>8</b>
<b>4.0 CONTRACTOR SUBMITTALS</b> .....	<b>9</b>
4.1 Submittals before Remediation.....	9
4.2 During Abatement Activities.....	10
<b>5.0 OWNER/OWNER'S REPRESENTATIVE SUBMITTALS TO CONTRACTOR</b> .....	<b>10</b>
<b>6.0 POTENTIAL MOLD CONTAMINATION HAZARD</b> .....	<b>10</b>
<b>7.0 STOP WORK</b> .....	<b>11</b>
<b>8.0 SITE USE</b> .....	<b>11</b>
<b>9.0 SITE SECURITY</b> .....	<b>11</b>
<b>10.0 EMERGENCY PLANNING</b> .....	<b>12</b>
<b>11.0 MATERIALS AND EQUIPMENT</b> .....	<b>13</b>
11.1 Materials .....	13
11.2 Equipment.....	14
11.3 Removal Equipment .....	14
11.4 Substitutions .....	15
<b>12.0 EXECUTION</b> .....	<b>15</b>
12.1 Preparation .....	15
<b>13.0 WORKPLACE ENTRY AND EXIT PROCEDURES</b> .....	<b>17</b>
13.1 General Requirements.....	17
<b>14.0 WORKER PROTECTION</b> .....	<b>18</b>
<b>15.0 ENVIRONMENTAL MONITORING REQUIREMENTS</b> .....	<b>19</b>
15.1 Barrier Isolation Integrity .....	19
15.2 Work Area Clearance .....	19
<b>16.0 DEFINITIONS</b> .....	<b>20</b>
<b>17.0 REFERENCES</b> .....	<b>25</b>

**APPENDIX A – Mold Remediation Drawing**

**APPENDIX B – Terracon Licenses**

## SPECIFICATIONS FOR REMEDIATION OF MOLD CONTAMINATED BUILDING MATERIALS

CASSIANO HOMES – 1818 KROCKER WAY  
San Antonio, Texas  
Terracon Project No. 90117173

### 1.0 BACKGROUND

A visual mold assessment intended to determine possible sources of moisture intrusion, as well as identify mold amplification sites was conducted at the above referenced facility by Terracon Consultants, Inc. (Terracon) on March 9, 2011. The assessment was conducted throughout the 1<sup>st</sup> and 2<sup>nd</sup> floors within the residence located at 1818 Krocker Way in San Antonio, Texas. Based on the observations made within the building, recommendations for remediation of observed mold amplification sites were made. Based on the results of the referenced visual mold assessment, Terracon recommended the following general remedial actions to reduce the potential for future moisture impact and indoor mold growth:

- Approximately two thousand, three hundred and fifty (2,350) square feet of visible mold growth was observed on the drywall and CMU comprising the walls and ceilings throughout the 2<sup>nd</sup> floor and stairwell. The fungal growth appears to be related to condensate formation and excessive moisture resulting from a domestic water supply line leak in the 2<sup>nd</sup> floor tub / shower.
- Approximately five hundred nineteen (519) square feet of visible mold growth was observed on the drywall and CMU comprising the walls and ceiling of the south portion of the 1<sup>st</sup> floor kitchen, the walls and ceilings of the 1<sup>st</sup> floor hallway adjacent to the restroom, and the north and east wall of the 1<sup>st</sup> floor restroom. The fungal growth appears to be related to excessive moisture resulting from a domestic water supply line leak in the 2<sup>nd</sup> floor tub / shower in the above referenced areas.
- Terracon recommended remediation of the drywall construction and associated building materials throughout the residence from floor to ceiling. Approximately 4,800 contiguous square feet of mold/moisture impacted drywall construction is believed to be present in this structure. An additional 830 square feet of mold impacted CMU shall be cleaned using an approved fungicidal solution. Remediation activities should include removal of any water damaged drywall construction adjacent to water damaged drywall construction materials and should extend a minimum of two feet past any visible mold growth or water damage. According to current TDSHS rules and regulations, quantities of visible growth above 25 contiguous square feet such as these should be removed by a properly trained and licensed mold remediation contractor who can control the release of mold spores during removal activities and properly treat any materials which will remain in the building.

- All remediation activities are recommended to be accomplished under controlled conditions using properly trained and licensed personnel.
- All remediation activities shall extend a minimum of two feet past any visible mold growth or evidence of water damage.
- **A limited asbestos survey has also been conducted in the building by Terracon and the drywall construction materials present were found to contain no asbestos. The CMU texture and the resilient floor tile and associated mastic were found to contain asbestos. The asbestos containing flooring will be abated prior to mold remediation as part of this contract. The decontamination operation involving the CMU is not considered an asbestos disturbance, and may be conducted by mold licensed personnel. (No asbestos license required for this activity)**

During the remediation project the following overall scope of work will be utilized:

- The Contractor will remove all water and moisture damaged drywall construction materials observed throughout the residence from floor to ceiling as directed by this protocol. Excessive moisture with condensate formation and associated fungal growth has occurred throughout the residence, and it is likely remediation/cleaning of the structural wood stud components will be required in these areas. It is estimated approximately 4,800 contiguous square feet of mold/moisture impacted drywall construction is believed to be present in this structure. An additional 830 square feet of mold impacted CMU shall be cleaned using an approved fungicidal solution.
- The wood studs present behind any drywall construction removed, and any structural or mechanical components which will remain following remediation operations shall also require antimicrobial treatment/cleaning to remove any mold growth which may be present in the area(s).
- All building insulation materials present in areas where remediation is conducted shall be removed and disposed of as mold/moisture impacted construction debris.
- All interior door materials present in areas where remediation is conducted shall be removed and disposed of as mold/moisture impacted construction debris.
- All HVAC duct materials present in areas where remediation is conducted shall be removed and disposed of as mold/moisture impacted construction debris.
- All cabinetry materials present in areas where remediation is conducted shall be removed and disposed of as mold/moisture impacted construction debris.
- All cove base materials removed from the lower wall areas shall be disposed of as mold/moisture impacted construction debris.
- **All remaining building/substrate materials (bathtub, studs, CMU walls, etc.) in the contained work areas shall be cleaned using an approved fungicidal solution prior to collection of clearance samples and any structural components which will remain will be sprayed with a pigmented fungicidal encapsulant following collection of clearance samples.**

## 2.0 SCOPE OF WORK

This specification covers the remediation of mold growth from building components listed in Section 2.1. It is the intent of the Contract Documents to identify the minimum work necessary to complete the project. The Contractor shall have proper knowledge of the conditions for the project along with the Contract Documents and is responsible for verifying the quantities and locations of all work to be performed as outlined in this section. Failure to do so shall not relieve the Contractor of his obligation to furnish all materials and labor necessary to carry out the provisions of the Contract.

**The Contractor should be aware that the work within this project shall be conducted in accordance with the Texas Department of State Health Services (TDSHS) Texas Mold Assessment and Remediation Rules.**

Mold remediation efforts must focus on containment, disinfection, removal, and proper disposal of mold-contaminated materials. For this project, containment procedures shall include establishing controlled access to the work area to prevent entry of the general public and non-licensed mold remediation individuals. During remediation activities, the contractor shall operate a minimum of one HEPA filtration unit (HFU) in any contained work area and vent the exhaust to the exterior of the building during gross removal activities. During non-remediation activities, the HFU machine(s) shall be operated in recirculation mode inside of the respective work area. The contractor shall utilize a minimum of one dehumidifying machine per work area at all times throughout the duration of the project.

The Contractor will furnish all labor, supervision, materials, services, insurance, and equipment necessary for the total removal of all identified areas of mold contamination and mold contaminated debris associated with those portions of the project site.

The Contractor will consult Section 3.0 Description of Work and the Mold Contaminated Material (MCM) Abatement Schedule in Section 2.1 as a guide and will visit the site to assess the estimated amounts of mold contamination present as well as the extent of physical difficulty involved in its complete removal.

The Contractor shall dispose of all water impacted and mold contaminated debris in a State Licensed landfill as Water Impacted Construction Debris in compliance with all applicable Federal, State and local statutes, laws, rules, regulations and requirements. The Contractor shall provide the Owner with disposal records indicating when and where the waste was disposed of such as receipts from the landfill scale house. Waste generated on this project does not currently require manifesting for transport or disposal.

In the event that procedural questions not covered by this job specification arise, the Contractor will be guided by the overall purpose of the scope of work. Intentional or willful violations of these job specifications will be grounds for immediate termination of the contract and possible assessment of damages.

The Contractor shall treat all mold contamination in the specified areas in the building, remove the specified contaminated/non-functional materials and other various porous building materials which exhibit growth, leave the specified components/areas to remain in a condition free of active mold contamination, and encapsulate the areas where work was conducted with an approved mold encapsulant product. The work areas shall be left in a condition free of mold contaminated debris, and all polyethylene sheeting, packaging and general waste shall be removed and disposed of by the Contractor.

## 2.1 Mold Contaminated Materials

If, at any time during the specified scope of work, the Contractor encounters any suspect mold contamination which was not characterized by the original specifications as containing or not containing mold contamination, or if the Contractor encounters any other area which might contain mold contamination as a matter of common knowledge in the mold abatement industry and which was not characterized by the original specifications as containing or not containing mold contamination, then the Contractor shall stop work immediately. The Contractor also shall immediately give notice to the Owner's Representative, in person or by telephone, describing the nature and location of the discovery. By the end of the next business day, the Contractor shall confirm the notices in writing. The Owner's Representative shall determine where testing is conducted and shall make any test results available to the Contractor. The Contractor shall not conduct any "additional work" in these areas until the Contractor has received written notice to proceed in all, or specified parts, of the work as indicated, with or without a change order. Where a change order is indicated, the Contractor shall not proceed with respect to that part of the work until the execution of the change order.

The following mold contamination and amounts, subject to Contractor verification, are scheduled for removal at a minimum at the project site:

**MOLD CONTAMINATED MATERIAL (MCM) ABATEMENT SCHEDULE**

Area Description	Type of Material to be Remediated	Approximate Quantity
1st Floor / 2 <sup>nd</sup> Floor / Stairwell	<p>The drywall wall and ceiling construction throughout the residence shall be removed. Any insulation materials associated with the wall and ceiling areas, including interior doors, HVAC duct materials, and cabinetry shall also be removed and disposed of as water impacted construction debris.</p> <p>Remediation activities shall be accomplished under controlled conditions and all drywall construction materials shall be removed a minimum of two feet past any visible mold growth or water damage. Following gross removal, the contractor shall clean and sanitize the remaining substrate/studs to ensure all contaminated building materials are removed. Remaining building materials such as CMU shall be cleaned and sprayed with a clear fungicidal sanitizing product prior to visual inspection by the Owner's Representative. Encapsulation with a pigmented fungicidal encapsulant shall be conducted following collection and acceptance of non-viable clearance testing results.</p>	<p>+/- 2,869 contiguous square feet of visible growth</p> <p>+/- 4,800 square feet of drywall construction to be removed</p> <p>+/- 830 square feet of CMU materials to be cleaned using an approved fungicidal solution.</p>

The Contractor shall schedule all work with the building management representatives and Terracon and shall provide them with 48 hours notice of any mobilization(s) at the site. It is anticipated that the majority of work should be accomplished in one mobilization. Remediation activities may occur during normal work hours as the building is currently not occupied.

In order for the remediation of biological contaminants to be successful, contaminants must be removed from the exposed surface as well as the interior of any cavities, framing components and any other areas which might have been impacted by migration of the moisture intrusion(s).

**2.2 General Removal Procedures**

The following general abatement procedures will be utilized for each area of the project:

- a. Initial emphasis for the process of decontamination should be placed on the containment, removal, and disposal of contaminated substrates. Sources of continued moisture infiltration will be corrected by the Owner under separate contract documents.
- b. The Contractor shall isolate the work areas to restrict access to only Texas Department of State Health Services licensed individuals for the assessment and remediation of mold-contaminated building materials. Restricted access shall be maintained throughout the duration of the project.

- c. Contractor shall mark the work area perimeters with caution tape and post notifications and barriers. Protected pathways for regular access of remediation personnel and transportation of contaminated material to and from the work area must be established. Access routes should not pass through cleaned areas.
- d. The electrical power shall be isolated and locked out or de-energized before the commencement of removal operations. All electrical devices and tools shall be equipped with Ground Fault Circuit Interrupters (GFCI). The GFCI shall be placed as close to the tool as feasible.
- e. The Contractor shall move any equipment, inventory, furniture, etc. to a location(s) as directed by the Owner or Owner's Representative prior to starting any removal activities. The Contractor shall protect any equipment, inventory, furniture, etc. remaining in the work area from theft, damage, or contamination.
- f. The materials will be removed under negative pressure within a contained area which has an integral one-chamber decontamination unit. The full containment will consist of critical barriers of 6-mil poly to be installed on all building openings, and a double layer of 6 mil poly will be installed over all flooring materials within the containment. Inverted prep will not be required, however negative pressure (minimum of  $-0.020$  in/H<sup>2</sup>O) will be maintained in all work areas during active removal operations. The decontamination chamber shall contain a vacuum equipped with a HEPA filter which each worker will utilize to remove the majority of contaminated materials and debris from their disposable clothing. All workers shall remove all disposable clothing and place into a double 6 mil waste bag for disposal before exiting the decontamination chamber. Containment construction shall extend from floor to ceiling and shall be attached to stable unmovable structures such as the adjacent wall or ceiling structure
- g. The goal for containment and removal procedures is to remove and dispose of all mold contamination in a way that will minimize the human exposure and damage to building materials and furnishings. The Contractor shall use proper worker protective equipment. Non-porous surfaces deemed salvageable by the Owner's Representative should be wet vacuumed, damp wiped, and/or HEPA vacuumed. If the materials contaminated are deemed by the Owner's Representative as non-salvageable the materials should be discarded by being removed and placed in water tight sealed double 6-mil poly waste disposal bags or wrapped and sealed in double layer 6 mil poly sheeting. All waste containers shall be wet wiped and cleaned prior to removing from containment.

- h. The Contractor shall apply the clear formulation of an EPA approved biocide to any remaining substrate materials in all work areas and all surfaces within the work areas once all impacted materials are removed. The purpose of this application is to destroy any non-visible mold growth on the surface of the non-porous materials which will remain in the work area. Prior to the application of the biocide, the contractor shall brush any heavily stained areas with a nylon brush to remove the bulk of accumulations
- i. Following the collection and acceptance of non-viable final clearance air samples, the contractor shall apply a pigmented formulation of a fungicidal encapsulant to the areas of visible staining on any remaining substrate materials. The purpose of this application is to deter future mold growth in these areas.
- j. The Contractor shall provide copies of the Materials Safety Data Sheets (MSDS's) for all chemical products utilized during the project to the Owner's Representative for review and acceptance.
- k. The Contractor shall remove and dispose of all drywall construction materials throughout the work areas which contain visible mold growth.
- l. A HEPA-filtered vacuum or negative air machine shall be used as a local exhaust source in the immediate proximity of any power equipment used to drill or saw drywall material. Any debris should be immediately cleaned up with a HEPA vacuum cleaner. Cutting should be performed with a sharp blade to minimize dust. Power saws, such as reciprocating or circular motion blade saws, should not be used unless their use is discussed prior to use and approved by the Owner's Representative. Confirm the presence of and remove any mold contamination in or on ducts, under walls, etc.
- m. The mold contaminated drywall shall be removed in pieces as large as manageable and wrapped or bagged in two layers of 6-mil polyethylene for disposal. Hammering shall not be used to remove drywall unless the work area is under "full" containment. All debris and drywall generated by the removal process should be immediately wrapped or bagged in a layer of polyethylene, taped closed, wrapped or bagged in a layer of polyethylene, taped closed, and immediately removed from the worksite. If dry dust is visually present, the debris shall be HEPA vacuumed.
- n. When all large pieces of drywall and debris in the wall cavity areas (stud construction) have been removed and contained, wall cavity areas shall be HEPA vacuumed. If any structural wood or other material is to be removed, the Contractor must determine if the members are load bearing before removal. If load bearing members are identified then temporary wall members should be appropriately placed prior to removal of any affected members.

- o. Exposed wall cavities, wood sill plate areas or metal channel surfaces shall be cleaned free of residual debris. All remaining substrate materials shall be treated with a clear biocide following a visual inspection by the Owner's Representative. Following collection and acceptance of non-viable clearance samples, the remaining substrate materials shall be treated with a pigmented mold growth inhibiting encapsulant. Plastic drop cloths used for secondary containment shall be rolled up and placed in plastic bags for disposal.
- p. HEPA filtration equipment shall be maintained in the work area until post remediation visual inspection by the Mold Assessment Consultant indicates that the work area is suitable for reoccupancy.
- q. A combination of HEPA vacuuming and damp wiping (with minimum water) shall be used to remove settled dust. Water spray can be used to reduce dust generation, but surfaces shall not be excessively wetted.
- r. The remediation shall not be deemed complete until the contractor has passed the Owner's Representative final visual clearance inspection and non-viable clearance air sampling results have been deemed acceptable. Once remediation activities have been deemed successful by the Owner's Representative, the Contractor may remove remaining containment barriers and dispose of them as Water Impacted Construction Debris.
- s. The Contractor shall return any equipment, inventory, furniture, etc. from the storage location(s) used during remediation to pre-remedial locations.

### 3.0 DESCRIPTION OF WORK

The work specified herein shall be the complete removal of all specified mold contaminated materials (Section 2.1) and associated mold contaminated debris. The work will be performed by competent persons trained, knowledgeable, and qualified in the techniques of remediation, handling, and disposal of mold contamination and the subsequent cleaning of internal contaminated areas. These competent persons must comply with all applicable Federal, State and local regulations and be capable of and willing to perform the work of this Contract.

The Contractor shall supply all labor, supervision, materials, services, insurance, permits and equipment necessary to carry out the work in accordance with all applicable Federal, State, and local regulations and these specifications.

The Contractor shall examine the site and verify that there are no known "special conditions" which must be considered by the Contractor when performing the mold contamination abatement (e.g., high temperatures, equipment that must remain in operation, other toxic substances in the air, high ceilings, or contaminated surfaces or fixtures). Any failure by the

Contractor to identify "special conditions" will not relieve him from the responsibility for estimating properly the difficulty or cost of successfully performing the work. It is possible additional mold growth will be discovered once drywall removal operations begin in each of the areas detailed but no allowance for additional fees will be made for situations which should have been identified prior to the start of work.

Final visual and air clearance sampling will be conducted by the Terracon representative. Terracon will be conducting visual clearances and final air clearance sampling on an as needed basis. The results of the final visual clearance will be communicated to the Contractor and Owner as soon as the inspection is complete. Final air clearance sampling results will be communicated to the Contractor and Owner as soon as the results are received.

**The Remediation Contractor shall be responsible, at the decision of the Owner, for the costs incurred for collection and analysis of all retests required by failure of initial clearance sample results.**

## **4.0 CONTRACTOR SUBMITTALS**

All submissions shall be made to the Owner's Representative.

### **4.1 Submittals before Remediation.**

- a. Submit satisfactory proof that any required permits have been obtained and that disposal site location and arrangements for transportation of mold contaminated waste materials have been made. If a separate transporter (other than the Contractor) is to be employed to transport the mold contaminated waste to the landfill, copies of the transporter's insurance shall be submitted to Owner's Representative.
- b. Submit a detailed work plan prepared in general compliance with the EPA guidance document "Mold Remediation in Schools and Commercial Buildings", this technical specification and the Texas Department of State Health Services Texas Mold Assessment and Remediation Rules.
- c. Document NIOSH approvals for all respiratory protective devices used on-site. Include manufacturer certification of HEPA filtration capabilities for all cartridges and filters.
- d. Submit documentation of respirator fit testing for all Contractor employees and agents who must enter the regulated area. This fit-testing shall be in accordance with qualitative procedures as detailed in the OSHA Standard 29 CFR 1910.134 Appendix C, Qualitative Fit Test Protocol or be quantitative in nature.

## 4.2 During Abatement Activities

- a. Submit job progress reports detailing remediation activities as requested by the Owner's Representative. Include review of program with respect to previously established milestones and schedules, major problems and action taken, injury reports, equipment breakdown and all bulk material and air sampling results conducted by Contractor.
- b. Submit copies of any waste shipment records, trip tickets, and disposal receipts for all mold contaminated waste materials removed from the work area during the abatement process.
- c. Submit daily, copies of worksite entry logbooks with information on worker and visitor access.
- d. Submit logs documenting filter changes on respirators, HEPA vacuums, HEPA filtration ventilation units, and other engineering controls.
- e. Post in the clean room area outside the worker decontamination unit a list containing the names, addresses, and telephone numbers of the Contractor, the Owner, the Owner's Representative, the General Superintendent, emergency support/facilities and any other personnel who may be required to assist during remediation activities.

## 5.0 OWNER/OWNER'S REPRESENTATIVE SUBMITTALS TO CONTRACTOR

- a. All air sampling and visual inspections will be performed by Terracon as needed; and a copy of any air sampling results shall be submitted to the Owner along with the Contractor's submittals for inclusion into the facility's permanent record.

## 6.0 POTENTIAL MOLD CONTAMINATION HAZARD

The disturbance or dislocation of mold contaminated materials may cause mold spores to be released into the building or ambient atmosphere, thereby creating a potential health hazard to workmen, building occupants, and others present at or near this site. Apprise all workers, supervisory personnel, subcontractors, consultants, and others who will be at the job site of the seriousness of the hazard and of proper work procedures that must be followed.

Where, in the performance of the work, workers, supervisory personnel, subcontractors, consultants or others may encounter, disturb or otherwise function in the immediate vicinity of any identified mold contamination, take appropriate continuous measures as necessary to protect all building occupants or others from the potential hazard of exposure to airborne mold contamination.

## 7.0 STOP WORK

If the Owner's Representative presents a written stop work order, the Contractor shall immediately and automatically stop all work. Do not recommence work until authorized in writing by Owner's Representative.

## 8.0 SITE USE

- a. The Contractor must confine operations at the site to the areas permitted under the Contract and as arranged with the Owner. Portions of the site beyond areas on which work is indicated are not to be disturbed except as necessary to insure the safety of those present at or near the site. The Contractor shall conform to site rules and regulations affecting the work while engaged in project construction.
- b. Keep existing driveways and entrances serving the premises clear and available to the Owner and for general public access at all times. Do not use these areas for parking or storage of materials without prior consent from Owner.
- c. Do not unreasonably encumber the site with materials or equipment. Storing of materials is to be approved by Owner in advance. Confine stockpiling of materials to the areas indicated by the Owner. If additional storage is necessary, obtain and pay for such storage off site.

## 9.0 SITE SECURITY

- a. The controlled access areas are to be restricted only to authorized, trained, and protected personnel. This may include the Contractor's employees, Owner's Representative, and employees of State and local inspectors and any other designated individuals. A list of authorized personnel shall be established before job start and posted at the entrance to the project site.
- b. Entry into the controlled access area by unauthorized individuals shall be reported immediately to the Owner's Representative by the Contractor.
- c. A logbook shall be maintained by the Contractor by the entrance to the controlled access area. Anyone who enters the controlled access area must record name, affiliation, time in, and time out for each entry.

- d. Access to the controlled area shall be through the west entrance to the building. All other means of access (doors, windows, hallways, etc.) shall be blocked or locked to prevent entry to or exit from the work area. The only exceptions for this rule are the waste pass-out airlock, which shall be sealed except during removal of containerized mold contaminated waste from the work area and emergency exits in case of fire or accident. Emergency exits shall not be locked from the inside.
- e. The Contractor shall control site security of their regulated work area during ongoing mold remediation whenever possible, in order to protect work efforts and equipment.
- f. The Contractor will have Owner/Responsible Party's assistance in notifying building/site occupants of impending activity and enforcement of restricted access by Owner/Responsible Party's employees.

## 10.0 EMERGENCY PLANNING

- a. Emergency planning (Health and Safety Plan) shall be developed before remediation initiation and agreed to by Contractor, Owner, and Owner's Representative.
- b. Emergency procedures shall be prepared by Contractor in written form and prominently posted in the clean room outside the worker decontamination area.
- c. Emergency procedures shall include written notification of police, fire, and emergency medical personnel of planned remediation activities, work schedule and layout of work area, particularly barriers that may affect response capabilities.
- d. Emergency planning shall include considerations of fire, explosion, toxic atmospheres, electrical hazards, slips, trips and falls, confined spaces and heat related injury. Written procedures shall be developed and employee training in procedures shall be provided. The Contractor shall provide one fire extinguisher in the work area for each 1,000 square feet of contained area or portion thereof. An additional fire extinguisher shall be placed at the entrance to the controlled access area.
- e. Employees shall be trained in evacuation procedures in case of workplace emergencies.
- f. For non life-threatening situations - Employees injured or otherwise incapacitated shall decontaminate following normal procedures with assistance from fellow workers, if necessary, before exiting the work place to obtain proper medical treatment.

- g. Telephone numbers of all emergency response personnel (including environmental substance agencies) shall be prominently posted at the entrance to the controlled access area, along with the location of the nearest telephone and the location of the nearest hospital. There must be a telephone available for emergency use at all times. If the owner does not have one on-site, the Contractor must provide one at his expense.

## **11.0 MATERIALS AND EQUIPMENT**

### **11.1 Materials**

- a. Deliver all materials in the original packages, containers, or bundles bearing the name of the manufacturer and the brand name (where applicable).
- b. Store all materials subject to damage off the ground, away from wet or damp surfaces and under cover sufficient to prevent damage or contamination. Replacement materials shall be stored outside of the work area until remediation is completed.
- c. Damaged, deteriorating or previously used materials shall not be used and shall be removed from the worksite and disposed of properly.
- d. Polyethylene sheeting used on walls, floors and/or stationary objects shall be a minimum of 6 mil thickness.
- e. Method of attaching polyethylene sheet shall be agreed upon in advance by the Contractor and Owner's Representative. Method of attachment may include any combination of duct tape or other waterproof tape, furring strips, spray glue, staples, nails, screws or sheets of polyethylene and capable of sealing polyethylene to dissimilar finished or unfinished surfaces under both wet and dry conditions.
- f. Polyethylene sheeting used shall be opaque white or black in color.
- g. Disposal bags shall be of clear, 6 mil polyethylene.
- h. The Contractor shall only use EPA approved biocidal products and such biocides will only be used according to the manufacturer's specifications. Biocides should not be used as a substitute for physical removal of contaminated material or to achieve a goal beyond which it was designed for. Fiberlock IAQ 6000 or a similar antimicrobial coating is approved for use on this project.

## 11.2 Equipment

- a. A sufficient quantity of HEPA filtration units equipped with multi-stage HEPA filtration and operated in accordance with ANSI standards (local exhaust ventilation requirements) and EPA guidance.
- b. Each HEPA filtration machine that is utilized on the project shall be tested/certified before the start of work. This test is intended to ensure that air does not bypass or leak around the HEPA filter assembly within the HEPA filtration machine.
- c. Personal respiratory protection shall be provided by the Contractor to each of its workers. At a minimum, workers conducting remediation/removal of the mold-contaminated materials shall wear a tight fitting half-face respirator equipped with a P-100 HEPA filter. During drywall removal operations, the workers conducting remediation in the work area are recommended to wear a full-face negative pressure respirator equipped with a P-100 HEPA filter. The Contractor shall be solely responsible for any/all fit testing, medical surveillance, and record keeping.
- d. Full body disposable protective clothing, including head, body and foot coverings (unless using reusable/cleanable footwear) consisting of material impenetrable by mold contamination will be provided to authorized visitors in sizes adequate to accommodate movement without tearing.
- e. Additional safety equipment (e.g. hard hats meeting the requirements of ANSI Standard Z87.1-1986, eye protection meeting the requirements of ANSI Standard Z87.1-1989, safety shoes meeting the requirements of ANSI Standard Z41.1-1991, and disposable PVC gloves), as necessary, shall be provided to all workers and authorized visitors.
- f. Non-skid footwear shall be provided to all abatement workers. Disposable clothing shall be adequately sealed to the footwear to prevent body contamination.
- g. A sufficient supply of disposable mops, rags, and sponges for work area decontamination shall be available.

## 11.3 Removal Equipment

- a. A sufficient supply of scaffolds, ladders, lifts and hand tools (e.g. scrapers, wire cutters, brushes, utility knives, wire saws, etc.) shall be provided as needed and shall be erected or set-up and maintained in a safe manner.
- b. Rubber or plastic dustpans, shovels, and squeegees shall be provided for cleanup.

- c. A sufficient supply of HEPA filtered vacuum systems shall be available during the mold contamination removal and cleanup to maintain proper negative pressure and ventilation requirements.

## 11.4 Substitutions

### 11.4.1 Pre-approval Required

- a. The Contract is based on the materials, equipment, and methods described in the Contract Documents.
- b. The Owner's Representative will consider proposals for substitutions of materials, equipment and methods only when such proposals are accompanied by full and complete technical data and all other information required by the Owner's Representative to evaluate the proposed substitution.
- c. Do not substitute materials, equipment, or methods unless such substitution has been specifically approved for this work by the Owner's Representative.

### 11.4.2 "Or Equal"

- a. Where the phrase "or equal" or "or equal as approved by the Owner" occurs in the Contract Document, do not assume that materials, equipment or methods will be approved by the Owner's Representative unless the item has been specifically approved for this work by the Owner's Representative.
- b. The decision of the Owner or Owner's Representative shall be final.

## 12.0 EXECUTION

### 12.1 Preparation

#### 12.1.1 Work Area - General Requirements

- a. Post warning signs and warning tape to demarcate the controlled access work area or other approaches where mold contamination may be reasonably expected to exceed ambient background levels.
- b. Shut down and lock out electric power to the work area. Make provisions to draw temporary power and lighting from outside the remediation area. Insure safe installation (including ground faulting) of temporary power sources and equipment by compliance with all applicable electrical code requirements and OSHA requirements for temporary electrical systems. All costs for electricity shall be paid by the Owner.

### 12.1.2 Worker Decontamination Area

- a. The Worker Decontamination Areas shall be provided at a location as close as practically possible to the work being conducted. A single decontamination chamber at the main entry area is acceptable for use during the remediation process in each work area. The system may consist of a pre-manufactured decontamination cell or an existing room or area outside of the work area, if the layout is appropriate, that can be enclosed in plastic sheeting, and made accessible to the work area. Enclosure systems may be constructed out of metal, wood, or plastic support as appropriate.
- b. The worker decontamination enclosure shall consist of, a single chamber large enough for a worker to remove any disposable protective clothing and double bag any waste being removed from the work area, and separated from the work area by airlocks. Pre-manufactured decontamination cells may be utilized. Double disposable Tyvek suits with head and foot covering will be used. The suits will be disposed of in the decontamination chamber.
- c. Pathways into (from clean to contaminated) and out from (contaminated to clean) the work area shall maintain controlled access to licensed mold remediation individuals and shall be clearly designated.
- d. A 6-mil polyethylene bag shall be placed in the decontamination chamber for collection of disposable clothing. Contaminated footwear (e.g. rubber boots, other reusable footwear) shall be stored for reuse the following work day.

### 12.1.3 Maintenance of the Controlled Access Work Area

- a. At any time during the remediation activities, if visible material is observed outside of the work area, work shall immediately stop and debris/residue immediately cleaned up using appropriate HEPA vacuuming and wet mopping procedures.
- b. Install and initiate operation of HEPA filtration equipment as needed to provide one air change in the work area every 15 minutes. In addition, a pressure differential of a minimum of -0.02 inches water column will be maintained by the pressure differential ventilation equipment. Provide a pressure differential measuring device such as a chart recorder or water manometer or equivalent for use to verify the pressure differential. This shall be documented hourly per 8-hour shift by the Project Supervisor. All exhaust ducts shall be vented to the outdoors.



- c. Insure that adequate power supply is available to satisfy the requirements of the ventilating units and other equipment. Location of the exhaust shall be to an exterior location and cannot be located near any building fresh air supply intakes. Twelve (12) inch extension ducting shall be used to reach from the work area to the exterior exhaust area. The Contractor shall insure that HEPA filters are changed regularly, filters are not obstructed or damaged and that the exhaust ducting does not release spores into uncontaminated building areas.

#### 12.1.4 Emergency Exits

Clearly identify and maintain emergency and fire exits from the work area. Emergency exits shall be established and clearly marked with duct tape arrows or other effective designations to permit easy visibility from anywhere within the work area. They shall be secured to prevent access from uncontaminated areas and still permit emergency exiting. These exits may be the worker decontamination enclosure, the waste pass-out airlock, and/or other alternative exits satisfactory to fire officials.

#### 12.1.5 Work shall not commence until:

- a. HEPA filtration ventilation systems are functioning properly.
- b. Electrical circuits in the work area are deactivated unless equipped with ground-fault circuit interrupts.
- c. All pre-work submissions, postings, and drawings have been provided and are satisfactory to the Owner's Representative.
- d. All equipment for remediation, clean up and disposal is on hand and proven to be in operating order.
- e. All worker training is completed and evidence thereof has been provided to Owner's Representative.

## 13.0 WORKPLACE ENTRY AND EXIT PROCEDURES

### 13.1 General Requirements

13.1.1 All workers and authorized personnel shall enter the controlled access area through the decontamination chamber located at the central portion of the guest vanity.

13.1.2 All personnel who enter the controlled access work area must sign the entry log maintained by the Contractor upon entry and exit.

13.1.3 All personnel, before entering the controlled access work area shall read and be familiar with all personal protection requirements (including workplace entry and exit procedures) and emergency procedures.

#### 13.1.4 Worker Protection Procedures During Entry and Exit

- a. All personnel shall remove all street clothes and appropriately don respiratory protection (as deemed adequate for the job conditions) and disposable coveralls, head covering and foot covering. Hard hats, eye protection, and gloves shall also be utilized, if required. Clean respirators and protective clothing shall be provided and utilized by each person for each separate entry into the work area.
- b. Before leaving the controlled access work area, all personnel shall remove gross contamination from the outside of respirators and protective clothing by brushing and/or wet wiping procedures. (Only small HEPA vacuums with brush attachments may be utilized for this purpose, as larger machines may tear the suits.) Each person shall clean bottoms of protective footwear in a walk-off pan using brushes or a "sticky mat" as appropriate before entering the decontamination chamber.
- c. Personnel shall remove all protective equipment except respirators in the decontamination chamber. Deposit disposable (or launderable) clothing into appropriately labeled bag(s) or containers for disposal.
- d. Reusable, contaminated footwear shall be properly stored when not in use in the work area. Rubber boots, if used, may be decontaminated at the completion of remediation for reuse.
- e. Still wearing respirators, clean the outside of the respirators and the exposed face area with a HEPA vacuum and damp disposable toweling prior to removal of respirator and exit from the decontamination chamber.
- f. After exiting the decontamination chamber and properly storing respiratory protective equipment, workers may return to their street clothing.

### 14.0 WORKER PROTECTION

- a. Requirements pursuant to applicable Occupational Safety and Health Administration (OSHA) standards found in 29 Code of Federal Regulations (CFR) 1910 and 1926 must be followed.
- b. A copy of the contractor's Safety & Health plan, specific to mold and mold remediation shall be provided to the Owner's Representative for review before the start of the project.

- c. All workers entering the work area and/or handling potentially mold-contaminated debris will wear an appropriate National Institute for Occupational Health and Safety (NIOSH)-approved air-purifying respirator with HEPA cartridges. Additional personnel protective equipment (i.e. suits, hood, foot, and eye protection) should be used as applicable. Protective garments will be removed and disposed of before leaving the work site.
- d. All workers shall be provided with training that includes mold decontamination and procedures to minimize cross-contamination of non-remediation areas. Documentation of training shall be provided to the Owner's representative before beginning work.
- e. Material safety data sheets (MSDS) must be available for all cleaning agents, biocidal agents and/or encapsulant products used on the site.

## 15.0 ENVIRONMENTAL MONITORING REQUIREMENTS

### 15.1 Barrier Isolation Integrity

At the start of each workday, the Contractor's supervisor will visually check barrier isolation integrity (HEPA negative air machines, critical barriers). HEPA filtration units and dehumidification machines will be utilized throughout the duration of the project until the work area is found to be free of visible growth by the owner's representative.

### 15.2 Work Area Clearance

- a. Environmental monitoring for airborne mold spores and inspection of the work area for visible debris will be utilized as clearance criteria. Airborne data collected from outside the building and from non-complaint areas within the subject building will serve as baselines for comparative analysis. The results of the baseline samples will be compared to interior clearance air samples collected from within the work area and used as clearance criteria.
- b. The following benchmarks shall be utilized for comparison:
  - Successful clearance will be based upon professional judgment rendered by the Owner's Representative and shall be based upon a certain percentage reduction scenario with similar fungal ecology. (i.e. 1,000 spores per cubic meter of air found outdoors and 500 inside containment would not be deemed acceptable). It is anticipated the reduction of spores would be below 20%-30% of the outdoor environment.

- A normal fungal ecology, as compared to outdoors on the day of testing, is expected to be present within the work area following remediation. Particularly, the absence of *Stachybotrys* sp, *Chaetomium* sp, and any potentially pathogenic fungi is sought.
- c. Surface samples may be collected as necessary to determine if cleaning is complete.
- d. Following all removal and cleaning operations, the Contractor shall seal the work area and the HEPA filtration and dehumidification equipment shall be operated for a minimum of 24 hours prior to the collection of post-remediation air samples.
- e. If post-remediation air test results are deemed acceptable by the Owner's Representative, the area may be released for removal of containment barriers and reoccupancy.

## 16.0 DEFINITIONS

Note: Not all of the definitions provided below may be relevant to this specific mold remediation project.

**ABATEMENT:** Reduction or elimination of mold contamination.

**AIR HANDLING UNIT (AHU):** For purposes of this document, refers to equipment that includes a blower or fan, heating and/or cooling coils, and related equipment such as controls, condensate drain pans, and air filters. Does not include ductwork, registers or grilles, or boilers and chillers.

**AIR PASSAGES:** Openings through or within walls, through floors and ceilings, and around chimney flues and plumbing chases, that permit air to move in and out of the conditioned spaces of the building.

**AIRLOCK:** A system for permitting ingress and egress with minimum air movement between a contaminated area and an uncontaminated area, typically consisting of one or more curtained doorways of overlapping sheeting which closes off the opening to a work area, thereby preventing flow-through contamination.

**ANIMAL DANDER:** Tiny scales of animal skin.

**ALLERGEN:** A substance capable of causing an allergic reaction because of an individual's sensitivity to that substance.

**ALLERGIC RHINITIS:** Inflammation of the mucous membranes in the nose that is caused by an allergic reaction.

**ANTIMICROBIAL:** Agent that kills microbial growth. See "disinfectant," "sanitizer," and "sterilizer."

**BREATHING ZONE:** Area of a room in which occupants breathe as they stand, sit, or lie down.

**BUILDING ENVELOPE:** Elements of the building, including all external building materials, windows, and walls that enclose the internal space.

**CEILING PLENUM:** Space below the flooring and above the suspended ceiling that accommodates the mechanical and electrical equipment and that is used as part of the air distribution system. The space is kept under negative pressure.

**CENTRAL AIR HANDLING UNIT (CENTRAL AHU):** This is the same as an air handling unit, but serves more than one area.

**CERTIFIED INDUSTRIAL HYGIENIST (CIH):** An individual certified in the comprehensive practice of industrial hygiene by the American Board of Industrial Hygiene.

**CFM:** Cubic feet per minute. The amount of air, in cubic feet, that flows through a given space in one minute. 1 CFM equals approximately 2 liters per second (L/s).

**CHEMICAL SENSITIZATION:** Evidence suggests that some people may develop health problems characterized by effects such as dizziness, eye and throat irritation, chest tightness, and nasal congestion that appear whenever they are exposed to certain chemicals. People may react to even trace amounts of chemicals to which they have become "sensitized."

**CO:** Carbon monoxide.

**CO<sub>2</sub>:** Carbon dioxide.

**DIFFUSERS AND GRILLES:** Components of the ventilation system that distribute and return air to promote air circulation in the occupied space. As used in this document, supply air enters a space through a diffuser or vent and return air leaves a space through a grille.

**DISINFECTANTS:** One of three groups of antimicrobials registered by EPA for public health uses. EPA considers an antimicrobial to be a disinfectant when it destroys or irreversibly inactivates infectious or other undesirable organisms, but not necessarily their spores. EPA registers three types of disinfectant products based upon submitted efficacy data: limited, general or broad spectrum, and hospital disinfectant.

**DRAIN TILE LOOP:** A continuous length of drain tile or perforated pipe extending around all or part of the internal or external perimeter of a basement or crawlspace footing.

**DRAIN TRAP:** A dip in the drain pipe of sinks, toilets, floor drains, etc., which is designed to stay filled with water, thereby preventing sewer gases from escaping into the room.

**ENVIRONMENTAL AGENTS:** Conditions other than indoor air contaminants that cause stress, comfort, and/or health problems (e.g., humidity extremes, drafts, lack of air circulation, noise, and over-crowding).

**EXHAUST VENTILATION:** Mechanical removal of air from a portion of a building (e.g., piece of equipment, room, or general area).

**FUNGI:** Any of a group of non-photosynthetic organisms that feed on organic matter, including molds and mildews.

**HEPA FILTER:** High efficiency particulate air (HEPA) filter capable of trapping and retaining 99.97% of particles greater than 0.3 micrometers in diameter.

**HEPA FILTRATION SYSTEM:** An air ventilation system utilizing HEPA filters that may or may not utilize a pressure differential relative to the work zone exterior.

**HEPA FILTER VACUUM COLLECTION EQUIPMENT (VACUUM CLEANER):** HEPA-filtered vacuum collection equipment with a filter system capable of collecting and retaining mold contamination.

**HVAC:** Heating, ventilating, and air-conditioning system.

**HYPERSENSITIVITY DISEASES:** Diseases characterized by allergic responses to pollutants. The hypersensitivity diseases most clearly associated with indoor air quality are asthma, rhinitis, and hypersensitivity pneumonitis. Hypersensitivity pneumonitis is a rare but serious disease that involves progressive lung damage as long as there is exposure to the causative agent.

**HYPERSENSITIVITY PNEUMONITIS:** A group of respiratory diseases that cause inflammation of the lung (specifically granulomatous cells). Most forms of hypersensitivity pneumonitis are caused by the inhalation of organic dusts, including molds.

**HYPHA OR HYPHAE:** The principal element of the growing or vegetative form of a mold (filamentous fungi) characterized by branching tube-like growth.

**IAQ:** Indoor air quality.

**INDOOR AIR POLLUTANT:** Particles and dust, fibers, mists, bioaerosols, and gases or vapors.

**MAKE-UP AIR:** See "Outdoor Air Supply."

**MECHANICALLY VENTILATED CRAWLSPACE SYSTEM:** A system designed to increase ventilation within a crawlspace, achieve higher air pressure in the crawlspace relative to air pressure in the soil beneath the crawlspace, or achieve lower air pressure in the crawlspace relative to air pressure in the living spaces, by use of a fan.

**MOLD CONTAMINANTS:** Agents derived from, or that are, living organisms (e.g., viruses, bacteria, fungi, and mammal and bird antigens) that can be inhaled and can cause many types of health effects including allergic reactions, respiratory disorders, hypersensitivity diseases, and infectious diseases. Also referred to as "micromolds" or "microbials."

**NEGATIVE PRESSURE:** Condition that exists when less air is supplied to a space than is exhausted from the space, so the air pressure within that space is less than that in surrounding areas. Under this condition, if an opening exists, air will flow from surrounding areas into the negatively pressurized space.

**ORGANIC COMPOUNDS:** Chemicals that contain carbon. Volatile organic compounds vaporize at room temperature and pressure. They are found in many indoor sources, including many common household products and building materials.

**OSHA:** Occupational Safety and Health Administration.

**OUTDOOR AIR SUPPLY:** Air brought into a building from the outdoors (often through the ventilation system) that has not been previously circulated through the system. Also known as "make-up air."

**PERMISSIBLE EXPOSURE LIMIT (PEL):** workplace exposure standards set by OSHA.

**PLENUM:** Air compartment connected to a duct or ducts.

**PM:** Preventive Maintenance.

**POSITIVE PRESSURE:** Condition that exists when more air is supplied to a space than is exhausted, so the air pressure within that space is greater than that in surrounding areas. Under this condition, if an opening exists, air will flow from the positively pressurized space into surrounding areas.

**PPM:** Parts per million.

**PREVENTIVE MAINTENANCE:** Regular and systematic inspection, cleaning, and replacement of worn parts, materials, and systems. Preventive maintenance helps to prevent parts, material, and systems failure by ensuring that parts, materials, and systems are in good working order.

**RE-ENTRAINMENT:** Situation that occurs when the air being exhausted from a building is immediately brought back into the system through the air intake and other openings in the building envelope.

**RE-ENTRY:** Situation that occurs when the air being exhausted from a building is immediately brought back into the system through the air intake and other openings in the building envelope.

**RECOMMENDED EXPOSURE LIMIT (REL):** Recommended workplace exposure limits established by the National Institute for Occupational Safety and Health (NIOSH).

**SANITIZER:** One of three groups of antimicrobials registered by EPA for public health uses. EPA considers an antimicrobial to be a sanitizer when it reduces but does not necessarily eliminate all the microorganisms on a treated surface. To be a registered sanitizer, the test results for a product must show a reduction of at least 99.9% in the number of each test microorganism over the parallel control.

**STERILIZER:** One of three groups of antimicrobials registered by EPA for public health uses. EPA considers an antimicrobial to be a sterilizer when it destroys or eliminates all forms of bacteria, fungi, viruses, and their spores. Because spores are considered the most difficult form of a microorganism to destroy, EPA considers the term sporicide to be synonymous with "sterilizer."

**THRESHOLD LIMIT VALUE (TLV®):** Workplace exposure guidelines established by the American Conference of Governmental Industrial Hygienists® (ACGIH®).

**VARIABLE AIR VOLUME SYSTEM (VAV):** Air handling system that conditions the air to constant temperature and varies the outside airflow to ensure thermal comfort.

**VENTILATION AIR:** Defined as the total air, which is a combination of the air brought inside from outdoors and the air that is being re-circulated within the building. Sometimes, however, used in reference only to the air brought into the system from the outdoors; this document defines this air as "outdoor air ventilation."

**VENTILATION RATE:** The rate at which indoor air enters and leaves a building. Expressed in one of two ways: the number of changes of outdoor air per unit of time (air changes per hour, or "ach") or the rate at which a volume of outdoor air enters per unit of time (cubic feet per minute, or "cfm").

**ZONE:** The occupied space or group of spaces within a building, which has its heating or cooling, controlled by a single thermostat.

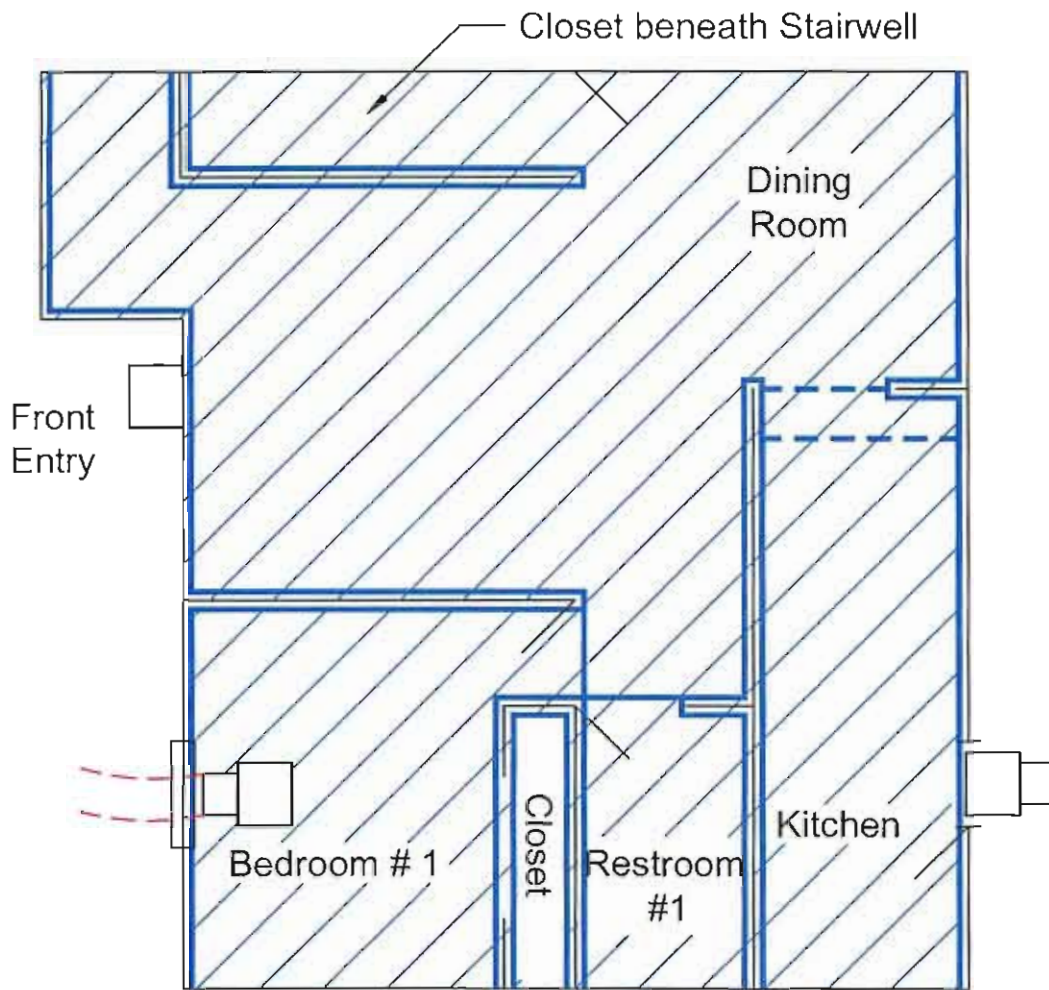
## 17.0 REFERENCES

1. Aerotech Labs, Inc. Common Indoor Molds. 2000.
2. Environmental Protection Agency Web Page. Indoor Air Quality Glossary.  
<http://www.epa.gov/iaq/glossary.html>
3. United States Environmental Protection Agency, Mold Remediation in Schools and Commercial Buildings. 2001.
4. New York City Department of Health Bureau of Environmental & Occupational Disease Epidemiology, Guidance on Assessment and Remediation of Fungi in Indoor Environments.
5. Bioaerosols, Assessment and Control. ACGIH. 1999.
6. Texas Department of State Health Services, Texas Mold Assessment and Remediation Rules. 2004.




APPENDIX A

MOLD REMEDIATION DRAWING





**LEGEND:**

-  STRIP, REMOVE AND DISPOSE OF VISIBLE MOLD GROWTH AND MOISTURE IMPACTED DRYWALL CONSTRUCTION. ( WALLS AND CEILINGS)
-  POTENTIAL LOCATION TO ESTABLISH 3-STAGE DECONTAMINATION CHAMBER
-  POTENTIAL LOCATION TO VENT HEU TO BUILDING EXTERIOR

*Will C. Deveau*  
 WILL C. DEVEAU  
 INDIVIDUAL ASBESTOS CONSULTANT  
 TDSHS LICENSE NO. 105734  
 EXPIRES 03/10/2013



Project Mgr:	WCD	Project No:	90117173
Drawn By:	LS(90)	Scale:	N.T.S.
Checked By:	WCD	File No:	90117173
Approved By:	WCD	Date:	05-31-11

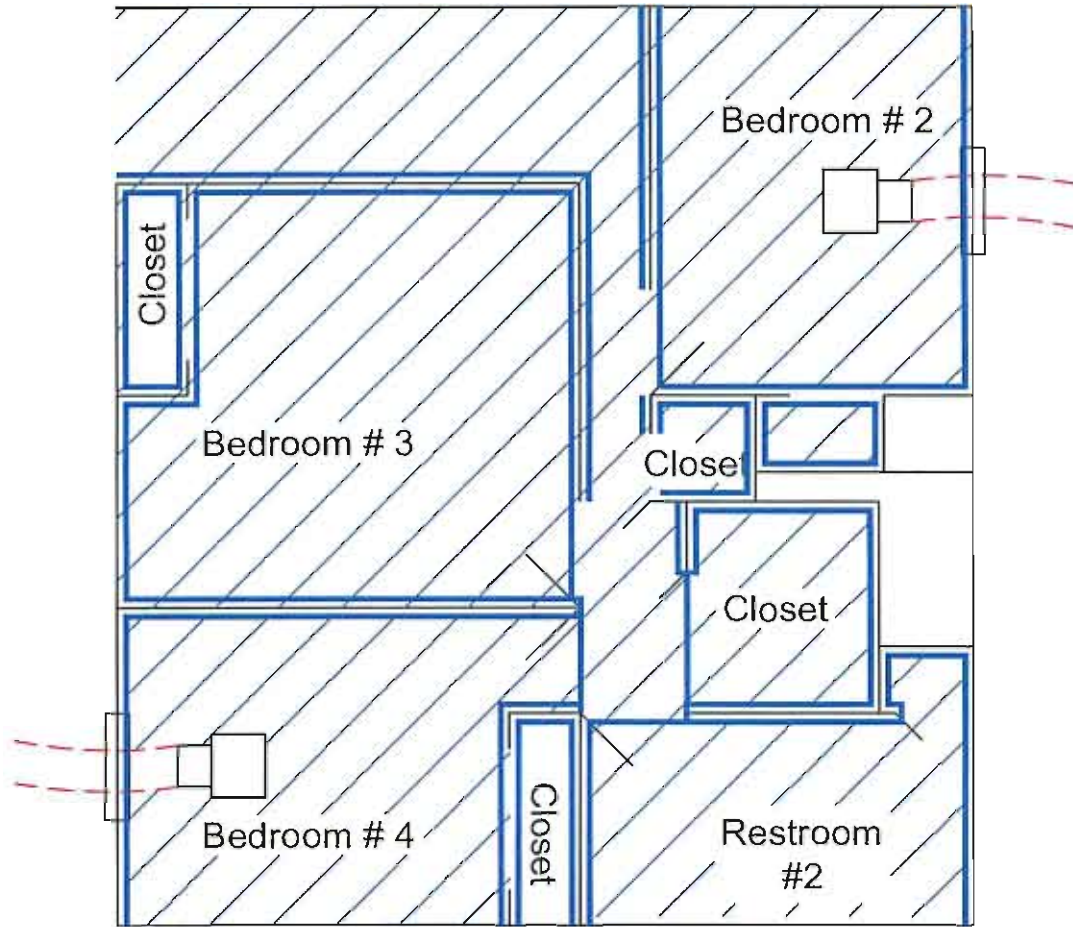
**Terracon**  
 Consulting Engineers and Scientists

6911 BLANCO ROAD SAN ANTONIO, TX 78216  
 PH (210) 641-2112 FAX (210) 641-2124

MOLD REMEDIATION DRAWING

Cassiano Homes  
 1818 Krocker Way  
 San Antonio, Texas

Figure No.  
 1



2nd Floor

**LEGEND:**



-STRIP, REMOVE AND DISPOSE OF VISIBLE MOLD GROWTH AND MOISTURE IMPACTED DRYWALL CONSTRUCTION (WALLS AND CEILING)



-POTENTIAL LOCATION TO VENT HEPA TO BUILDING EXTERIOR

*Will C. Deveau*

WILL C. DEVEAU  
 INDIVIDUAL ASBESTOS CONSULTANT  
 TOSHS LICENSE NO. 105734  
 EXPIRES 03/10/2013



Project Mgr	WCD
Drawn By	LS(90)
Checked By	WCD
Approved By	WCD

Project No.	90117173
Scale	N.T.S.
File No.	90117173
Date:	05-31-11

**Terracon**  
 Consulting Engineers and Scientists

6911 BLANCO ROAD SAN ANTONIO, TX 78216  
 PH: (210) 641-2112 FAX: (210) 641-2124

MOLD REMEDIATION DRAWING

Cassiano Homes  
 1818 Krockner Way  
 San Antonio, Texas

Figure No.	2
------------	---

APPENDIX B

TERRACON LICENSES



# TEXAS DEPARTMENT OF STATE HEALTH SERVICES

*Be it known that*

## **TERRACON CONSULTANTS INC**

is licensed to perform as a

### **Mold Assessment Company**

*in the State of Texas and is hereby governed by the rights, privileges, and responsibilities set forth in Title 25, Texas Administrative Code, Chapter 295, relating to Texas Mold Assessment and Remediation Rules, as long as this license is not suspended or revoked.*

A handwritten signature in black ink, appearing to read "David Lakey, M.D.", written in a cursive style.

David Lakey, M.D.  
Commissioner of Health

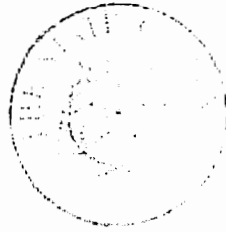
License Number: ACO0117

Expiration Date: 12/14/2011

Control Number: 6483

(Void After Expiration Date)

VOID IF ALTERED      NON-TRANSFERABLE



# TEXAS DEPARTMENT OF STATE HEALTH SERVICES

BE IT KNOWN THAT

**WILL C DEVEAU**

is hereby licensed and authorized to perform as a

**Mold Assessment Consultant**

in the State of Texas and is hereby governed by the rights, privileges, and responsibilities set forth in Title 25, Texas Administrative Code, Chapter 295, relating to Texas Mold Assessment and Remediation Rules, as long as this license is not suspended or revoked.

A handwritten signature in black ink, appearing to read "David Lakey MD".

David L. Lakey, M.D.  
Commissioner of Health

License Number: **MAC1173**

Control Number: **7195**

Expiration Date: **9/16/2012**

(Void After Expiration Date)

VOID IF ALTERED NON-TRANSFERABLE



# TEXAS DEPARTMENT OF STATE HEALTH SERVICES

BE IT KNOWN THAT

**RICHARD I HOWES**

is hereby licensed and authorized to perform as a

**Mold Assessment Consultant**

in the State of Texas and is hereby governed by the rights, privileges, and responsibilities set forth in Title 25, Texas Administrative Code, Chapter 295, relating to Texas Mold Assessment and Remediation Rules, as long as this license is not suspended or revoked.

A handwritten signature in cursive script that reads "David Lakey MD".

David L Lakey, M.D  
Commissioner of Health

License Number: MAC0112

Control Number: 6931

Expiration Date: 12/13/2011

(Void After Expiration Date)

VOID IF ALTERED NON-TRANSFERABLE