



Project Manual

Single Family House Renovations:

38 Forest Trail Ct.

Columbia SC 29063

Project No.

CI-032619

For

**The Housing Authority Of the
City of Columbia, SC
1917 Harden Street
Columbia, SC 29204**



Reasonable Accommodations
Available Upon Request
TDD: (803) 256-7762



DOCUMENT 00020 - INVITATION FOR BIDS

March 3, 2019

Project Title: 38 Forest Trail Court

Project No: CI- 030619

Bid Opening: June 11, 2019, @ **2:00 p.m.**
1917 Harden St.
Columbia, SC 29204

Bidders must have at least the minimum license indicated below:

- SC General Contractor's License
- SC Residential Builder's License
- SC Specialty License
- SC Business License

Owner:
Columbia Housing Authority
Columbia, SC 29204
Phone: (803) 376-5047

Architect/Engineer: N/A

The Columbia Housing Authority will receive sealed bids for a renovations contract from qualified licensed residential builder to complete the renovations at 38 Forest Trail Court. All quantities shall be verified and the contractor's bid shall not be based on the Housing Authority's count.

This project is to be completed within 60 calendar days from the date of notice to proceed. Liquidated damages for this project are set at \$100.00 (one hundred dollars) per day for each day beyond the contractual date of completion.

A site visit has been scheduled for May 28, 2019 at 2:00 p.m. The site visit is suggested, but not mandatory. Those interested should report to 38 Forest Trail Court not later than that time.

Bids will be on a lump sum basis. **No conditions can be included in the bid. Bids must be based solely on the written bid package and all subsequently issued addenda. Conditional bids will be rejected without further consideration.**

Bid Packets may be obtained by downloading them from the **Procurement & Contracting** section of CHA's website at www.chasc.org. The prospective bidders are responsible for obtaining the 2019 specifications and all project related documents from the CHA website to include all project related addendas.

Bids will be opened and publicly read aloud immediately after specified opening time indicated above. Bids received after specified time will not be accepted. Faxing or emailing of bid documents is not allowed. All interested parties are invited to attend the bid opening.

All bids must contain the following: (All documents must be downloaded from <http://www.chasc.org/individual-bid-forms.html>)

1. Bid Guarantee, for contracts exceeding \$100,000. This Guarantee must be consistent for Section 9, of the Instructions To Bidders (HUD 5369)
2. 00 310 Bid Form
3. 00 430 Non-Collusive Affidavit
4. 00 426 Representations, Certifications and Other Statements of Bidders (HUD 5369-A)
5. Certificate of Section 3 Compliance
 - a. 00 443 Estimated Project Work Force – Prime Contractor
 - b. 00 444 Estimated Project Work Force – Sub Contractor
6. 00 451 MBE Participation Certification

Prior to Contract Execution, the low Bidder shall furnish on forms provided by or in a format acceptable to the Owner the following documents:

1. Subcontractor and Supplier List(s)
2. Performance and Payment Bonds (For Bids \$90,000.00 and greater)
3. Insurance Certificate(s)
4. Sub-grantee/Contractor/Subcontractor Certifications & Assurances

Performance and Payment Bonds in the amount of One Hundred Percent (100%) of the contract amount will be required on bids \$90,000.00 and greater. Bonds must be issued by a company listed in the Department of Treasury's most recent version of Treasury Circular 570 which can be found at https://www.fiscal.treasury.gov/fs_a_z_index.htm

Contract for work under this bid will obligate the Contractor and subcontractors not to discriminate in employment practices. Bidders shall submit a compliance report in conformity with Executive Order No. 11246. The Housing Authority encourages minority owned businesses to participate.

The Columbia Housing Authority shall have the right to reject any or all bids and to waive minor technicalities and irregularities in the bidding process.

Direct all technical inquiries to: Hemphill Pride III, Construction Inspector
The Columbia Housing Authority, Phone (803) 376-5047, Ext. 345

Direct all procedural inquiries to: Cynthia Godbey, Director of Procurement & Contract Administration
The Columbia Housing Authority, Phone (803) 254-3886, Ext. 234

END OF DOCUMENT 00020

Project Name: 38 Forest Trail Court			Project Number: CI-030619		
SPECIFICATION LIST 2018					
X - Indicates documents included in this contract. The Contractor is responsible for downloading the required specifications from our website at www.chasc.org					
x	00 210 HUD 5369-Instructions to Bidders		02 270 Erosion & Sediment Control	x	10 801 Toilet & Bath Accessories
x	00 250 Example of Bid Envelope		02 361 Termite Control		11 451 Residential Appliance
x	00 310 Bid Form		02 511 Hot Mix Asphalt Paving		12 357 Federal Sewer Use Casework
x	00 410 Bid Bond		02 530 Sanitary Sewerage	x	12 358 Standard Particle Board Cabinets
x	00 425 Statement Of Bidders		02 630 Storm Drainage		15 050 Basic Mechanical Materials & Methods
x	00 426 HUD 5369-A Representations and Certifications		02 751 Cement Concrete Paving		15 060 Hangers & Supports
x	00 430 Form of Non Collusive Affidavit		02 764 Pavement Joint Sealant		15 075 Mechanical Identification
x	00 440 Introduction to Section 3		02 900 Landscaping		15 081 Duct Insulation
x	00 441 Section 3 Specification Clause	x	03 301 Cast In Place Concrete		15 083 Pipe Insulation
x	00 442 Certificate of Section 3 Compliance	x	04 901 Clay Masonry Restoration & Cleaning		15 100 Valves
x	00 443 EPWF- Prime Contractor		05 500 Metal Fabrication		15 122 Meters & Gages
x	00 444 EPWF- Sub Contractor		05 521 Pipe & Tube Railing		15 300 Plumbing Equipment
x	00 450 Contractor's Tracking Form	x	06 100 Rough Carpentry		15 411 Water Distribution Piping
x	00 451 Columbia Housing Auth. MBE Req.		06 176 Metal Plate Connected Wood Trusses	x	15 420 Sanitary Waste & Vent Piping
x	00 452 Section 3; Periodic Estimate Cert.	x	06 200 Finish Carpentry	x	15 430 Plumbing Specialties
x	00 453 Minimum Wage Compliant Poster		06 651 Solid Surface Fabrications	x	15 440 Plumbing Fixtures
x	00 454 Davis Bacon Prevailing Wage Rate	x	07 210 Building Insulation		15 486 Fuel Fired Domestic Water Heater
	00 454A Davis Bacon Prevailing Wage Rate 4 Story		07 311 Asphalt Shingles		15 496 Natural Gas Piping
x	00 455 Bidder's Experience Form	x	07 312 Architectural Asphalt Shingles		15 738 Split System Air Conditioning& Hydro Heat
x	00 456 Contractor's Certificate of Attachment to PE		07 460 Siding		15 741 Packaged Heat Pump
x	00 470 Substitution Request Form		07 464 Vinyl Siding		15 812 Small Split System Heat Pump
x	00 510 Form Of Agreement		07 540 Thermoplastic Membrane Roofing		15 815 Metal Ducts
x	00 625 Performance Payment Bond		07 620 Sheet Metal Flashing & Trim	x	15 820 Duct Accessories
x	00 710 HUD 5370 General Conditions of the Contract	x	07 711 Guttering & Accessories		15 853 Power Ventilators
x	00 810 Supplementary Conditions		07 841 Through Penetration Firestop System		15 855 Registers & Grilles
x	01 140 Work Restrictions		07 920 Joint Sealants		15 990 Testing, Adjusting, Balancing
	01 210 Allowances		08 110 Steel Doors & Frames	x	16 050 Basic Electrical Materials & Methods
	01 230 Alternates		08 180 Metal Screen Doors		16 120 Conductors and Cables
	01 270 Unit Prices	x	08 211 Doors		16 130 Raceways & Boxes
x	01 310 Project Mgmt & Coordination		08 212 Stile & Rail Wood Doors	x	16 140 Wiring Devices
	01 320 Construction Progress Documentation		08 511 Aluminium Windows	x	16 470 Power Distribution Units
x	01 330 Submittal Procedure		08 516 Heavy Vandalism Window Screens		16 515 Interior Lighting
	01 400 Quality Requirements	x	08 561 Vinyl Replacement Window		Appendix (are available for download at our website)
x	01 500 Temporary Facilities & Controls	x	08 710 Door Hardware	x	HUD 51001 - Periodic Estimate for Partial Payment
	01 600 Product Requirements	x	09 260 Gypsum Board Assemblies	x	HUD 51002 - Schedule of Change Orders
	01 700 Execution Requirements		09 310 Ceramic Tile	x	HUD 51003 - Schedule of Materials Stored
x	01 731 Cutting & Patching		09 651 Resilient Floor Tile	x	HUD 51004 - Summary of Stored Materials
x	01 732 Selective Demolition		09 665 Sheet Vinyl Flooring	x	WH-347 Certified Payrolls
x	01 770 Close Out Procedures	x	09 680 Carpet		
x	01 772 Contractor's Guarantee	x	09 900 Painting		
	02 110 Site Clearing		10 425 Signs		
x	02 200 Earthwork	x	10 520 Fire Protection Specialties		

SECTION 01100 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

Recent code revision enforced by the City/County at the time of the bid opening will adhere to this project.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Project consists of selective demolition, modernization, and rehabilitation of one (1) single family house.

1. Project Location: 38 Forest Trail Court, Columbia, S.C. 29063
2. Owner: The Housing Authority of the City of Columbia, 1917 Harden Street, Columbia, South Carolina, 29204.

- B. Architect Identification: N/A

- C. This house is approximately 1050 sq. ft. The work consists of but is not limited to the replacement of drywall, cabinets, counter tops, trim, plumbing and electrical components, floor coverings, windows and doors and landscaping. The scope of work also includes painting and pressure washing.

1.2.1 ITEMS OF WORK

- A. General

1. Upon receipt of written Notice to Proceed, the contractor shall be responsible for project security and for the cost and repair of any damages due to vandalism. This responsibility shall extend until the date of final acceptance of the work by the owner.
2. The Contractor shall be responsible for obtaining all necessary permits for the performance of the work. The Contractor shall provide CHA with copies of all permits prior to beginning work.
3. The Contractor shall be responsible for the daily and continuous removal of all debris from the site. All debris and excess materials removed from the site shall be disposed of in an approved solid waste facility. The stockpiling of waste material in and around the site is prohibited; however a construction dumpster is acceptable.
4. At completion of work and prior to a request for final inspection by CHA, the Contractor shall thoroughly clean the house and remove all construction debris, dust and left over

materials. Refer to **Section 01770-Closeout Procedures** for final closeout and cleaning requirements.

5. This house is vacant.
6. **ACM test results are attached immediately after this section**

B. Walls

1. Remove drywall from walls in both bathrooms only
2. Replace exterior bathrooms wall R-13 insulation
3. Install blocking in walls for both bathrooms for towel bars and toilet paper holders.
4. Install new moisture resistant ½” drywall for both bathrooms and finish smooth and prepare for paint. All drywall shall be installed and finished in accordance with 3.06 Finishing Gypsum Board Assemblies
5. All other walls are to be repaired from cracks, holes and voids in accordance with Section 09260 – Gypsum Board Assemblies

C. Ceilings

1. Install new attic access door in hallway. New door shall be ply-wood with hinges and hasp.
2. Install new case around attic door. Access door will be 22”X30”
3. Repair all drywall from cracks, holes and voids in accordance with Section 09260 – Gypsum Board Assemblies

D. Flooring

1. Remove all quarter round, baseboards and all floor coverings throughout.
2. The contractor is responsible for making sure the bathroom floors are level with adjacent surfaces using gypcrete as a level compound.
3. Install plank flooring in all rooms except for bedrooms. Flooring shall be Rapture Plank by Earth Werks or equal and installed per manufacturer recommendation. Color to be SRP712 or equal and shall be installed by an experienced installer with at least 5 years of experience. Install transition strips as needed when one material transitions to another.
4. Install new padding and carpet in each bedroom in accordance with Section 09680-Carpet. New color to be Candid Truffle #55750 30 oz. polyester with a 10 year warranty. Secure padding as recommended by the manufacturer.
5. Install new baseboard throughout and install new quarter round in areas where vinyl planked flooring is installed. Baseboard and quarter round shall be in accordance Section 06200 Finish Carpentry. Fill nail holes with wood putty and caulk all joints/gaps prior to painting.

E. Cabinets/Vanities/Shelving

1. Replace kitchen cabinets with new solid wood cabinets. New cabinets shall be KCMA Certified and be constructed of solid ¾” 7ply face panels, ½” shelves. All exposed ends shall be finished. Provide a clear opening above the stove to receive a 30” vent-less hood. All cabinets and vanities are required to be factory finished. Color to be selected by

owner from samples provided by the contractor. Cabinets and counter tops shall not exceed 36" in height. Cabinets shall not extend to the ceiling. The new cabinets shall match the layout of the previously removed cabinets, however do not include the soffit. **See pictures.**

2. Do not replace both cabinets over kitchen sink. Repair area where wall cabinets were removed and paint.
3. Replace kitchen counter tops with new laminated, post form, countertops in accordance with Section 12358-Standard Particleboard Cabinets. Backsplashes shall be a minimum of 4 inches in accordance with the specifications. Include backsplashes at kitchen counter top. **See pictures.**
4. Remove existing dish washer and replace with a base cabinet.
5. Replace Hallway-bathroom and master bathroom vanities in accordance with Section 12358-Standard Particleboard Cabinets.
6. Vanities and tops shall not exceed 34" in height and the top shall be cultured marble in accordance with the specifications listed above.

F. Doors

1. Replace interior doors and frames (to include trim) in accordance with Section 08211-Doors. Interior doors shall be 6- panel in accordance with the above section. Interior doors shall have 3 hinges. (Door hardware shall match door hinges which shall both coordinate with light fixtures) Top and bottom rails of door shall be wood. No MDF will be accepted.
2. Replace front and back doors to include jamb with 6-panel fiberglass doors in accordance with Section 08211-Doors.
3. Install two (2) new storm doors for the front and back Doors are to be white with full-glass.
4. Install a new wide angle peep hole for front and back doors at 60 inches above finished floor.
5. Install new rigid door stops throughout at each door.
6. Replace bi-fold doors living room, coat closet and hallway HVAC door. Like kind replacement
7. Replace hallway closet door with like kind replacement
8. Reframe first bedroom closet to receive (2) doors 59"
9. Reframe second bedroom closet door to receive (2) doors 71"
10. Reframe master bedroom to (2) doors 96"
11. Remove double doors in kitchen. Install new single door. New door is to swing left. Frame opening where door was removed and cover with vinyl siding. Install new door trim for interior and exterior. Match existing siding color.
12. Install new door hardware in accordance with 08710-Door Hardware. Bedrooms and bathrooms shall receive privacy locks. Linen and coat closets shall receive passage knobs except for bedroom closets which will receive "dummy knobs". Exterior locks are not part of this contract.

G. Coatings

1. Once all drywall is repaired in the proper manner paint the interior of the house in accordance with Section 09900-Painting.
 - a. All painted surfaces, are to receive primer and two coats of paint. See Section 09900-Painting for paint color and details.

- b. Interior doors and trim shall be painted semi-gloss white. Doors shall be painted on all 6 sides.
- c. Paint (2) exterior doors with white semi-gloss exterior paint in accordance with Section 09900-Painting.
- d. Drywall in the kitchen and bathrooms shall be painted with semi-gloss paint along with all baseboards, ¼ round, window and door trim throughout. See Section 09900-Painting for paint color and details.

H. Porch/Handrails

N/A

I. Heating/Venting/Air Conditioning

1. Replace all registers and return grilles associated with the system in accordance with Section 15815-Metal Ducts and 15820-Duct Accessories.
2. Replace thermostat with a digital, non-programmable thermostat.
3. Install a new 70 cfm exhaust fan in each bathroom ceiling. Pipe bathroom vent to the exterior in accordance with manufacturers written instructions and current code requirements. Pipe shall terminate at the gables. Install a diffuse to redirect the exhaust downward.

J. Plumbing

1. Replace all shut off valves at each fixture riser with 1/4 turn brass shut-off valves.
2. Install new non-metallic unions at water heater for easy removal
3. Replace plumbing components including kitchen sink, lavatory and fixtures, toilets, and supply risers in accordance with Section 15440-Plumbing Fixtures and Section 15420-Sanitary Waste. Install 2 new frost proof hose bibs at the front and rear elevation in accordance with Section 15430-Plumbing Specialties.
4. Remove existing water lines for dish washer and ice maker.
5. Replace the tub in the hallway bathroom with a fiber-glass tub and 3-piece surround in accordance with Section 15440-Plumbing Fixtures.
6. Install new corner stand up shower in master bathroom. Replace with like kind replacement. **See picture**
7. Install new enclosed plumbing washer box in accordance with Section 15430 and replumb. **See picture**

K. Electrical

1. Replace all switches, receptacles and cover plates in accordance with Section 16140-Wiring Devices. Install (2) new GFCI receptacles in the kitchens and (1) in each bathroom in accordance with code.
2. Install new GFCI receptacles at the front and back doors including plastic cover to protect circuit from rain.
3. Install hardwired smoke detectors, with battery backup, in each bedroom and hallway in accordance with Section 10520-Fire Protection Specialties. Add an additional hardwired smoke detector in the hallway. (3 bedrooms + 1 hall = 4 total)
4. Install new telephone jacks and cable outlets in each bedroom in accordance with Section-16050 Basic Electrical Materials and Methods to include wire for each. New

wire shall terminate at the existing utility junction boxes located on the exterior of the building. Install a new telephone jack in the kitchen and a new cable outlet in the living room. Remove all service mounted wiring from the exterior of the home.

5. Replace interior and exterior light fixtures throughout. New fixtures shall receive 13w LED light bulbs except for fluorescent lights. Two (2) bulb fixtures shall be installed in the bedrooms, living room and dining area. All other non-fluorescent fixtures shall be one (1) bulb. Bathroom fixture shall be a wall mounted vanity light fixture with four (4) bulbs. Install new 4-foot 4-bulb fluorescent fixture for kitchen and in laundry room
6. Install a new hardwired door bell system at the front door. Doorbell chime shall be located in the hallway.
7. Install a new 30 inch vent-less range hood.

L. Roof

1. Clean roof from all debris.
2. Clean off debris from gutters

M. Exterior

1. Replace (4) window openings in accordance with Section 08561-Vinyl Replacement Windows throughout the house. Remove aprons and provide drywall returns. Color to be white.
2. Install 1-inch mini blinds for all windows.
3. Replace (3) pairs of shutters. Color to be Green
4. Pressure wash house using medium pressure spray (400 to 800 psi) and use a non-acidic liquid cleaner for vinyl siding in accordance with Section 04901-Clay Masonry & Cleaning.
5. Install new mail box.

N. Landscaping

Front yard

1. Plant (5) 5-gallon Compacta Hollies to the left of front porch.
2. Plant (8) 5-gallon Compacta Hollies to right of front porch.
3. Remove all existing bushes in front of house
4. Rake and clean all debris from front yard

Back yard

5. Sixteen (16) trees to be removed will be marked.
6. All areas where trees & stumps are removed will be back-filled, leveled and seeded.
7. Cut down and grind stumps for (6) Oak trees 4",5",5",6",6" & 12" in diameter
8. Cut down and grind stumps for (10) Pine Trees 4",5",6",9",9",9",12",14",14" & 18"
9. Grind both small stumps
10. Rake and clean all debris from backyard

O. Miscellaneous

1. Install new bathroom accessories to include surface mounted medicine cabinets, toilet paper holders, towel bars, soap dish and tooth brush holder for both bathrooms in accordance with **Section 10801-Toilet and Bath Accessories.**
2. Install a 30"x30" stainless steel back splash at wall behind stove. Back splash shall extend from behind the range hood to behind the top of stove.
3. Clean out storage closet
4. Replace water meter box. Like kind replacement

CONTRACT

- A. Project will be constructed under a general construction contract.

1.3 CONTRACT TIME

- A. This project is to be completed within sixty (60) calendar days.

1.4 WORK SEQUENCE

- A. The Contractor shall have access to the house(s) upon receiving a written Notice to Proceed.

1.5 USE OF PREMISES

- A. General: Contractor shall have limited use of site for construction operations, including use of Project site, during construction period. Contractor's use of premises is limited only by Owner's right to perform work or to retain other contractors on portions of Project.

1.6 OWNER-FURNISHED PRODUCTS

1.7 None

1.8 MISCELLANEOUS PROVISIONS

- A. Contractor shall provide a full time project superintendent experienced in this type of work and acceptable to the Owner. This individual must meet the OSHA requirements for capability of identifying hazardous materials in the workplace. See Division 1 Section "Project Management and Coordination".
- B. Contractor is responsible for Project security and for the cost and repair of any damage due to vandalism from the Notice to Proceed date to the date of final acceptance of the building by the Owner. See the General Conditions of the Contract for Construction, The Supplementary Conditions of the Contract, and Division 1 Sections "Work Restrictions" and "Temporary Facilities and Controls."

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - PICTURES



E. Cabinets/Vanities/Shelving #1 & #2

SUMMARY

01100 - 7



J. Plumbing #6

SUMMARY

01100 - 8



J. Plumbing #7

IN OF SECTION 01100

Honor



The Earth

Environmental Consulting Services, Inc.

April 15, 2019

Columbia Housing Authority
1917 Harden Street
Columbia, SC 29204
Attn: Hemphill Pride

RE: Asbestos and Lead Inspection of Interior and Exterior
Residence Located at 38 Forest Trail, Columbia, South Carolina 29212

Dear Hemphill:

Per your request, I visited the above referenced residence located in Columbia, South Carolina on March 18, 2019 to perform an asbestos and lead inspection concerning the interior and exterior of this residence. Suspect asbestos containing material samples and suspect lead based paint collected during this visit were then forwarded to a NVLAP/ELAP rated laboratory for analysis.

The results of this inspection, along with observations and recommendations, are included in this report for your review.

It is always a pleasure assisting the Columbia Housing Authority with projects. If you have any questions, please contact me at 803/772-1070 or at 803/609-7126 (mobile).

With kind regards,

A handwritten signature in black ink, appearing to read 'G. Donald Cobb'.

G. Donald Cobb
SCDHEC Licensed Mgt. Planner # 22081
2570-I

Interior/Exterior Asbestos Inspection Results
38 Forest Trail, Columbia South Carolina 29212
Environmental Consulting Services, Inc. Report Date April 15, 2019

This one story brick residence is approximately 950 sf in size and is constructed on a crawlspace with a gabled shingled roof. The attic contained non suspect fiberglass batt insulation. The windows were vinyl framed with vinyl seals. The exterior roof gables and roof soffits were all vinyl siding. The HVAC ductwork was insulated with non suspect fiberglass duct wrap on the trunk line, sealed with duct tape and the runouts were fiberglass flex duct.

Interior surfaces included 12" X 12" white/tan streaked floor tiles and associated adhesive in the kitchen and laundry room, white with squares linoleum and associated adhesive on top of this bottom layer of flooring in the kitchen only, wood plank pattern linoleum (no adhesive observed) in the hall restroom and the master bedroom restroom, sheetrock/drywall joint compound (DJC) wall material throughout the structure (except for the kitchen which had wood paneled walls), and spray finish ceiling on top of sheetrock/DJC ceiling material throughout the structure. The rest of the residence that didn't have floor tiles or linoleum had hard wood flooring. All flooring was on a plywood substrate throughout the structure.

The suspect asbestos containing materials analyzed by PLM analysis from this residence included the bottom layer of 12" X 12" white/tan streaked floor tiles and associated adhesive in the kitchen and laundry room, the white with squares linoleum and associated adhesive on top of this bottom layer of flooring in the kitchen, the wood plank pattern linoleum (no adhesive observed) in the hall restroom and master bedroom restroom, the sheetrock/drywall joint compound (DJC) wall material, the spray finish ceiling on top of sheetrock/DJC ceiling material, the roofing felt, and the roof shingles.

Each of these materials analyzed by PLM analysis yielded a negative for asbestos content.

Since the bottom layer of 12" X 12" white/tan streaked floor tiles and associated adhesive, the white with squares linoleum and associated adhesive on top of this bottom flooring, the wood plank pattern linoleum (no adhesive observed), the roofing felt, and the roof shingles are each known as Category I non-friable materials that yielded a negative for asbestos content through PLM analysis, TEM analysis was also performed (as per the current SCDHEC regulation) for each of these materials. The TEM analysis results also yielded a negative for asbestos content for each of these materials and these materials can be considered as conventional construction debris, for renovation or demolition purposes.

Attempts were made by the inspector to sample all materials down to the substrate. Environmental Consulting Services, Inc. will not be responsible for inaccessible suspect materials (such as flooring that may have been inaccessible under other flooring, underground piping, materials that may exist inside the walls, etc.) that may be uncovered during abatement, renovation, or demolition.

A detailed listing of samples, along with the EHS, Inc. laboratory analysis report is included in this report for your review. The square or linear footages of all materials sampled, condition of the materials ("good" or "damaged"), and potential for disturbance ("significant potential for disturbance" or "spd"), can be found on the enclosed "Executive Summary List of Suspect Materials form".

Lead Inspection Results – Interior and Exterior of Residence
38 Forest Trail, Columbia South Carolina 29212
Environmental Consulting Services, Inc. Report Date April 15, 2019

The paint colors analyzed in this sampling strategy for lead based paint from this residence were the white paint on the interior doors, window sills, and baseboard molding; the white paint on the exterior of the doors, and the bone white paint on the interior walls. Sampling was performed by homogeneous color and was performed down to the substrate.

The result of each of these paints was less than 0.06% by weight and these paints are considered (by the Consumer Products Safety Commission) to NOT contain lead-based paint. Surfaces with these paints adhered to them can be considered to be conventional construction debris, for renovation or demolition purposes.

It should also be noted that any demolition materials that are disposed of with the lead-based paint still intact must be TCLP tested prior to disposal by the disposal entity.

A detailed listing of materials sampled (with original laboratory analysis results) is also included in this report.

Index

- PLM Report of Suspect Asbestos Samples
- TEM Analysis Report
- Lead Analysis Report
- Project Drawing Detailing Suspect Asbestos Sample Locations
- Copy of Inspector's SCDHEC License

PLM Report of Suspect Asbestos Samples



ENVIRONMENTAL CONSULTING SERVICES, INC. EXECUTIVE SUMMARY LIST OF SU
 7001 St. Andrews Rd PMB 425 Columbia, SC 29212 FAX 803 216 9908 phone: 803 772 1070

Due Date: **S**
 03/28/2019

CONSULTANT: **Don Cobb** LICENSE # **22081** SUBMITTED TO: **FHS**
 E-MAIL RESULTS: YES **ecsinc@sc.it.com** DATE OF COLLECTION: **3/18/19** DATE SENT TO LAB: **3/22/19**
 # OF SAMPLES: **29**

(Thursday) **AE**

ECS, INC. CLIENT: **COLUMBIA HOUSING AUTHORITY - CHA** CLIENT CONTACT: **N. PRIOR**
 BUILDING NAME: **RESIDENCE @ FOREST TRAIL - COLA SC** PROJ.#: **2520-J**

SAMPLE #	TYPE OF ANALYSIS	PCM (PLM)	ITEM	LEAD AIR	LEAD BK	OTHER	IF ASBESTOS BULK		TURN TIME: CONTINUTR	
							AMOUNT	COND.		
01							95 FTZ	INF	COND	PFED
02							"	"	"	"
03							"	"	"	"
04							"	"	"	"
05							"	"	"	"
06							"	"	"	"
07							55 FTZ	INF	COND	PFED
08							"	"	"	"
09							"	"	"	"
10							"	"	"	"
11							"	"	"	"
12							"	"	"	"
13							INF	COND	PFED	PFED

Relinquished by: **[Signature]** Received by: **FAITH BUTTS**
 Relinquished by: **[Signature]** Received by: **FAITH BUTTS**

PLEASE TYPE PROJECT NAME AND # ON REPORT, THANKS!
 INSPECT-1

D:4:40am
 3/20/19

fn
 fn
 fn
 fn

19-03-0319 D

ENVIRONMENTAL CONSULTING SERVICES, INC. EXECUTIVE SUMMARY LIST OF SUSPECT MATERIALS CHAIN OF CUSTODY

7001 St. Andrews Rd PMB 425 Columbia, SC 29212 FAX 803 216 9908 phone: 803 772 1070

CONSULTANT: Don Cobb LICENSE # 22081 SUBMITTED TO: EHS

OF SAMPLES: 29 E-MAIL RESULTS: YES ecsinc@sc.ir.com DATE OF COLLECTION: 3/18/19 DATE SENT TO LAB: 3/22/19

ECS, INC. CLIENT: Colombian House on Archer St CHA CLIENT CONTACT: A. Pryor PROJ.#:

BUILDING NAME: RESIDENCE @ 38 FOREST TRAIL COLA SC

PHYSICAL ADDRESS: 38 FOREST TRAIL COLA SC

TYPE OF ANALYSIS: PLM TEM LEAD AIR LEAD BK OTHER: ROUT INR

SAMPLE #	MATERIAL SAMPLED AND SAMPLE LOCATION	AMOUNT	IF ASBESTOS BULK		COND.	PFD
			I,I,I-NF,F	COND.		
14	WOOD PLANK LAMINATE - BATH - HALL - NO ADHESIVE OBSERVED	38 FT ²	INF	G	G	MPP
15	6" x 11" - BATHROOM	2	2	2	2	2
16	S/R D/C WALL MATERIAL - KIT	3500 FT ²	11NF	G	G	MPP
17	6" x 6" - HALL	1	1	1	1	1
18	6" x 6" - BRT	1	1	1	1	1
19	6" x 6" - BRT II	1	1	1	1	1
20	6" x 6" - LIVING ROOM	1	1	1	1	1
21	S/R/D/C SPRAY FINISH CEILING MATERIAL - KIT	950 FT ²	F	G	G	MPP
22	S/R/D/C SPRAY FINISH CEILING MATERIAL - LIVING ROOM	11	F	1	1	1
23	6" x 6" - HALL	1	F	1	1	1
24	ROOFING FEET	1050 FT ²	INF	C	C	MPP
25	6" x 6"	1	1	1	1	1
26	6" x 6"	1	1	1	1	1

Relinquished by: [Signature] Received by: Earth Drops Environmental
 Relinquished by: [Signature] Received by: Earth Drops Environmental
 PLEASE TYPE PROJECT NAME AND # ON REPORT, THANKS!
 INSPECT-1
 10:44 am
 3/22/19

19-03-0819D

ENVIRONMENTAL CONSULTING SERVICES, INC. EXECUTIVE SUMMARY LIST OF SUSPECT MATERIALS CHAIN OF CUSTODY

7001 St. Andrews Rd PMB 425 Columbia, SC 29212 FAX 803 216 9908 phone: 803 772 1070

CONSULTANT: Don Cobb LICENSE #: 22081 SUBMITTED TO: EHS

OF SAMPLES: 29 E-MAIL RESULTS: YES ecsing@sc.it.com DATE OF COLLECTION: 3/18/19 DATE SENT TO LAB: 3/22/19

ECS, INC. CLIENT: Columbia Housing Authority CLIENT CONTACT: H. PALLOR

BUILDING NAME: RESIDENCE @ 38 FOREST TRAIL CDA SC PROJ.#:

PHYSICAL ADDRESS: TEM LEAD AIR LEAD BK OTHER: TURN TIME: PATTOR

TYPE OF ANALYSIS PCM IF ASBESTOS BULK AMOUNT COND. PFD

SAMPLE # MATERIAL SAMPLED AND SAMPLE LOCATION

27 Roof Shingle Brown/Black 1050 F7C INF G MFD

28 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

29

Received by: [Signature]

Received by: Edith Briggs Edith Briggs

PLEASE TYPE PROJECT NAME AND # ON REPORT, THANKS! INSPECT-1

10/14/2019 01/25/19

72



Environmental Hazards Services, L.L.C.
 7469 Whitepine Rd
 Richmond, VA 23237
 Telephone: 800.347.4010

Asbestos Bulk Analysis Report

Report Number: 19-03-03190

Client: Environmental Consulting Svcs
 7001 St. Andrews Road
 PMB 425
 Columbia, SC 29212

Received Date: 03/25/2019
 Analyzed Date: 03/27/2019
 Reported Date: 03/28/2019

Project/Test Address: Residence @ 38 Forest Trail; Cola, SC

Client Number:
 42-1931

Fax Number:
 803-216-9908

Laboratory Results

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
19-03-03190-001	01		White/Tan Vinyl; Homogeneous	NAD	100% Non-Fibrous
19-03-03190-002	02		White/Tan Vinyl; Homogeneous	NAD	100% Non-Fibrous
19-03-03190-003	03		White/Tan Vinyl; Homogeneous	NAD	100% Non-Fibrous
19-03-03190-004	04		Yellow Adhesive; Homogeneous	NAD	100% Non-Fibrous
19-03-03190-005	05		Yellow Adhesive; Homogeneous	NAD	100% Non-Fibrous

Environmental Hazards Services, L.L.C

Client Number: 42-1931

Report Number: 19-03-03190

Project/Test Address: Residence @ 38 Forest Trail; Cola, SC

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
19-03-03190-006	06		Yellow Adhesive; Homogeneous	NAD	100% Non-Fibrous
19-03-03190-007	07		White Vinyl; Gray Fibrous; Inhomogeneous	NAD	25% Cellulose 15% Fibrous Glass 60% Non-Fibrous
19-03-03190-008	08		White Vinyl; Gray Fibrous; Inhomogeneous	NAD	25% Cellulose 15% Fibrous Glass 60% Non-Fibrous
19-03-03190-009	09		White Vinyl; Gray Fibrous; Inhomogeneous	NAD	25% Cellulose 15% Fibrous Glass 60% Non-Fibrous
19-03-03190-010	10		Pale Yellow Adhesive; Homogeneous	NAD	100% Non-Fibrous
19-03-03190-011	11		Pale Yellow Adhesive; Homogeneous	NAD	100% Non-Fibrous
19-03-03190-012	12		Pale Yellow Adhesive; Homogeneous	NAD	100% Non-Fibrous
19-03-03190-013	13		Brown Vinyl; Homogeneous	NAD	3% Fibrous Glass 97% Non-Fibrous

Environmental Hazards Services, L.L.C

Client Number: 42-1931

Report Number: 19-03-03190

Project/Test Address: Residence @ 38 Forest Trail; Cola, SC

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
19-03-03190-014	14		Brown Vinyl; Homogeneous	NAD	3% Fibrous Glass 97% Non-Fibrous
19-03-03190-015	15		Brown Vinyl; Homogeneous	NAD	3% Fibrous Glass 97% Non-Fibrous
19-03-03190-016	16		Gray Powdery; White Granular; Brown Fibrous; Inhomogeneous	NAD	32% Cellulose 68% Non-Fibrous
19-03-03190-017	17		Gray Powdery; White Granular; Brown Fibrous; Inhomogeneous	NAD	32% Cellulose 68% Non-Fibrous
19-03-03190-018	18		White Powdery; Granular; Brown Fibrous; Inhomogeneous	NAD	32% Cellulose 68% Non-Fibrous
19-03-03190-019	19		Gray Powdery; White Granular; Brown Fibrous; Inhomogeneous	NAD	32% Cellulose 68% Non-Fibrous
19-03-03190-020	20		Gray Powdery; White Granular; Brown Fibrous; inhomogeneous	NAD	30% Cellulose 70% Non-Fibrous

Environmental Hazards Services, L.L.C

Client Number: 42-1931

Report Number: 19-03-03190

Project/Test Address: Residence @ 38 Forest Trail; Cola, SC

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
19-03-03190-021	21		Gray Powdery; White Granular; Brown Fibrous; Inhomogeneous	NAD	32% Cellulose 68% Non-Fibrous
19-03-03190-022	22		Gray Powdery; White Granular; Brown Fibrous; Inhomogeneous	NAD	32% Cellulose 68% Non-Fibrous
19-03-03190-023	23		Gray Powdery; White Granular; Brown Fibrous; Inhomogeneous	NAD	32% Cellulose 68% Non-Fibrous
19-03-03190-024	24		Black Tar like Fibrous; Homogeneous	NAD	86% Cellulose 14% Non-Fibrous
19-03-03190-025	25		Black Tar like Fibrous; Homogeneous	NAD	86% Cellulose 14% Non-Fibrous
19-03-03190-026	26		Black Tar like Fibrous; Homogeneous	NAD	86% Cellulose 14% Non-Fibrous
19-03-03190-027	27		Black/Brown Aggregate; Black Tar like; Inhomogeneous	NAD	16% Fibrous Glass 84% Non-Fibrous

Environmental Hazards Services, L.L.C

Client Number: 42-1931

Report Number: 19-03-03190

Project/Test Address: Residence @ 38 Forest Trail; Cola, SC

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
19-03-03190-028	28		Black/Brown Aggregate; Black Tar like; Inhomogeneous	NAD	16% Fibrous Glass 84% Non-Fibrous
19-03-03190-029	29		Black/Brown Aggregate; Black Tar like; Inhomogeneous	NAD	16% Fibrous Glass 84% Non-Fibrous

QC Sample: 27-M12009-3

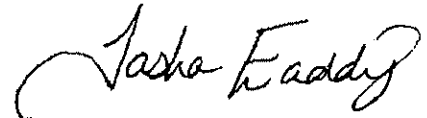
QC Blank: SRM 1866 Fiberglass

Reporting Limit: 1% Asbestos

Method: EPA Method 600/R-93/116, EPA Method 600/M4-82-020

Analyst: Sami Hosn

Reviewed By Authorized Signatory:



Tasha Eaddy
QA/QC Clerk

The condition of the samples analyzed was acceptable upon receipt per laboratory protocol unless otherwise noted on this report. Each distinct component in an inhomogeneous sample was analyzed separately and reported as a composite. Results represent the analysis of samples submitted by the client. Sample location, description, area, volume, etc., was provided by the client. This report cannot be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without the written consent of the Environmental Hazards Service, L.L.C. California Certification #2319 NY ELAP #11714 NVLAP #101882-0 VELAP 460172. All information concerning sampling location, date, and time can be found on Chain-of-Custody. Environmental Hazards Services, L.L.C. does not perform any sample collection.

Environmental Hazards Services, L.L.C. recommends reanalysis by point count (for more accurate quantification) or Transmission Electron Microscopy (TEM), (for enhanced detection capabilities) for materials regulated by EPA NESHAP (National Emission Standards for Hazardous Air Pollutants) and found to contain less than ten percent (<10%) asbestos by polarized light microscopy (PLM). Both services are available for an additional fee.

400 Point Count Analysis, where noted, performed per EPA Method 600/R-93/116 with a Reporting Limit of 0.25%.

* All California samples analyzed by Polarized Light Microscopy, EPA Method 600/M4-82-020, Dec. 1982.

LEGEND: NAD = no asbestos detected

TEM Report of PLM Samples



Environmental Hazards Services, L.L.C.
 7469 Whitepine Rd
 Richmond, VA 23237
 Telephone: 800.347.4010

110082188

TEM Bulk 3-Day

Received Date: 03/28/2019

Due Date: 04/02/2019

EHS Client #: 42-1931

Report Number: 19-03-04003

Project/Test Address: Residence @ 38 Forest Trail; Cola, SC; EHS# 19-03-03190

Analysis Requested: TEM Bulk 3-Day

Sample #	Sample Type	Sample Location and/or Comments	Volume (liters)
1-6	TEM Bulk	Tile Only	
1-6		Mastic Only	
7-12		Flooring Only	
7-12		Adhesive Only	
13,14,15		Flooring Only	
21-26		Roof Felt Only	
27,28,29		Roof Shingle Only	

Date/Time	Released By:	Date/Time	Received By:
3/28/19	T. Robinson	RECEIVED	
		MAR 28 2019	

By CR

Client Name: Environmental Hazards Services, Inc.

Table I
Summary of Bulk Asbestos Analysis Results
 42-1931; Residence @ 38 Forest Trail; Cola, SC; EHS# 19-03-03190

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
01	1-6		0.261	14.7	83.9	1.5	NA	NAD
Location: Tile Only								
02	1-8		---	---	---	---	NA	NA
Location: Mastic Only "Insufficient Material Submitted For Preparation"								
03	7-12		0.172	54.2	44.0	1.9	NA	NAD
Location: Flooring Only								
04	7-12		0.114	40.6	38.9	19.4	NA	NAD
Location: Adhesive Only								
05	13,14,15		0.300	79.3	15.9	4.9	NA	NAD
Location: Flooring Only								
06	24-26		0.166	96.6	3.0	0.4	NA	Chrysotile Trace
Location: Roof Felt Only								
07	27,28,29		0.345	24.2	40.0	35.8	NA	NAD
Location: Roof Shingle Only								

TEM Analyzed By:  Date Analyzed: 3/30/2019 Reviewed By:  Date Reviewed: 3/30/2019

Semi-Quantitative Analysis: NAD = no asbestos detected; NA = not analyzed; NA/PS = not analyzed due to positive stop; Trace = <1%;
 PLM analysis by EPA 600/R-93/116 per 40 CFR 763 (NVLAP Lab Code 101904-0) or NY ELAP 196.1 for New York friable samples which includes quantitation of any vermiculite observed (195.6 for NOB samples) or EPA 400 pt ct by EPA 600/M4-82-020 (NY ELAP Lab # 10984);
 TEM prep by EPA 600/R-93/116 Section 2.3 (analysis by Section 2.5, not covered by NVLAP Bulk accreditation); or NY ELAP 198.4 for New York NOB samples (NY ELAP Lab # 10984);

** Warning Notes: Consider PLM fiber diameter limitation, only TEM will resolve fibers <0.25 micrometers in diameter. TEM bulk analysis is representative of the fine grained matrix material and may not be representative of non-uniformly dispersed debris, soils or other heterogeneous materials for which a combination PLM/TEM evaluation is recommended; Quantitation for beginning weights of <0.1 grams should be considered as qualitative only.

119041835

110041881
4.4.19

ENVIRONMENTAL CONSULTING SERVICES, INC.

7001 St Andrews Rd PMB 425 Columbia, SC 29212

FAX 803 216 9908 phone: 803 772 1070

EXECUTIVE SUMMARY LIST OF SUSPECT MATERIALS

CHAIN OF CUSTODY

CONSULTANT: Don Cobb

LICENSE #: 22080

SUBMITTED TO: AMERISCI

E-MAIL RESULTS: YES ecsinc@sc.t.com

OF SAMPLES: 1

DATE OF COLLECTION: 4/5/19

DATE SENT TO LAB: 4/8/19

ECS, INC. CLIENT: COLUMBIA HOUSING AUTHORITY (CHA)

CLIENT CONTACT: H. PRIDE

BUILDING NAME: RESIDENCE @ 38 FOREST TRAIL OLA SC

PROJ.#: 2570-I

PHYSICAL ADDRESS:

TYPE OF ANALYSIS: PCM PLM TEM LEAD AIR LEAD BK OTHER:

TURN TIME: 24 HR

SAMPLE # MATERIAL SAMPLED AND SAMPLE LOCATION AMOUNT IF ASBESTOS BULK COND. PFD

TEM01 12X12 TAN STREAKED FT ADHESIVE UNDER WHITE

BOARDS LINOLEUM IN KITCHEN FROM SAMPLES B1-06

2d try

RECEIVED

APR 09 2019

Relinquished by: Don Cobb Received by:

Relinquished by: Received by:

PLEASE TYPE PROJECT NAME AND # ON REPORT, THANKS!

INSPECT-1

Client Name: Environmental Consulting Services, Inc.

Table I
Summary of Bulk Asbestos Analysis Results
 2570-I; Residence; 38 Forest Trail, Cola, SC

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
01	TEM01		0.142	57.1	23.2	19.7	NA	NAD

Location: 12x12 Tan Streaked FT Adhesive Under White Squared Linoleum In Kitchen From Samples 01-06

TEM Analyzed By: T. Brian Keith  Date Analyzed: 4/10/2019 Reviewed By:  Date Reviewed: 4/10/2019

Semi-Quantitative Analysis: NAD = no asbestos detected; NA = not analyzed; NA/PS = not analyzed due to positive stop; Trace = <1%; PLM analysis by EPA 600/R-93/116 per 40 CFR 763 (NVLAP Lab Code 101904-0) or NY ELAP 198.1 for New York friable samples which includes quantitation of any vermiculite observed (198.6 for NOB samples) or EPA 400 pt ct by EPA 600/M4-82-020 (NY ELAP Lab # 10984); TEM prep by EPA 600/R-93/116 Section 2.3 (analysis by Section 2.5, not covered by NVLAP Bulk accreditation); or NY ELAP 198.4 for New York NOB samples (NY ELAP Lab # 10984);

** Warning Notes: Consider PLM fiber diameter limitation, only TEM will resolve fibers <0.25 micrometers in diameter. TEM bulk analysis is representative of the fine grained matrix material and may not be representative of non-uniformly dispersed debris, soils or other heterogeneous materials for which a combination PLM/TEM evaluation is recommended; Quantitation for beginning weights of <0.1 grams should be considered as qualitative only.

Lead Bulk Analysis Report

ENVIRONMENTAL CONSULTING SERVICES, INC. EXECUTIVE SUMMARY LIST OF SUSPECT MATERIALS

7001 St. Andrews Rd PMB 425 Columbia, SC 29212 FAX 803 216 9908 phone: 803 772 1070 CHAIN OF CUSTODY

CONSULTANT: Dan Gias LICENSE #: 22081 SUBMITTED TO: EHS

OF SAMPLES: 5 E-MAIL RESULTS: YES ecsinc@sc.tr.com DATE OF COLLECTION: 3/18/19 DATE SENT TO LAB: 3/22/19

ECOS. INC. CLIENT: Columbia Housing Authority CLIENT CONTACT: A. Poirier

BUILDING NAME: RESIDENCE @ 38 FOREST TRAIL COLA SC PROJ.#: 2570-J

PHYSICAL ADDRESS: _____

TYPE OF ANALYSIS: PCM TEM LEAD AIR LEAD BULK OTHER: _____

SAMPLE # MATERIAL SAMPLED AND SAMPLE LOCATION AMOUNT IF ASBESTOS BULK COND. PFD

LAB 01	WHITE ON INT DOORS			
LAB 02	WHITE ON EXT DOORS			
LAB 03	WHITE ON SHOP MANGING			
LAB 04	CHA BENTS WHITE ON WALLS - INTERNAL			
LAB 05	WHITE ON INTERNAL WINDOW SILL			

19-03-03230



Due Date: 03/28/2019 (Thursday) AE

SUD

[Signature]

Relinquished by: _____ Received by: F. Ash 3/25/19 1:34
 Relinquished by: _____ Received by: _____ PLEASE TYPE PROJECT NAME AND # ON REPORT, THANKS! INSPECT-1



Environmental Hazards Services, L.L.C.
 7469 Whitepine Rd
 Richmond, VA 23237
 Telephone: 800.347.4010

Lead Paint Chip
 Analysis Report

Report Number: 19-03-03230

Client: Environmental Consulting Svcs
 7001 St. Andrews Road
 PMB 425
 Columbia, SC 29212

Received Date: 03/25/2019
 Analyzed Date: 03/27/2019
 Reported Date: 03/27/2019

Project/Test Address: Residence @ 38 Forest Trail; Cola, SC
Collection Date: 03/18/2019

Client Number:
 42-1931

Laboratory Results

Fax Number:
 803-216-9908

Lab Sample Number	Client Sample Number	Collection Location	Pb (ug/g) ppm	% Pb by Wt.	Narrative ID
19-03-03230-001	LBP01	WHITE ON INT DOORS	<46	<0.0046	
19-03-03230-002	LBP02	WHITE ON EXT DOORS	<43	<0.0043	
19-03-03230-003	LBP03	WHITE ON SHOP MOLDING	<39	<0.0039	
19-03-03230-004	LBP04	CHA BONES WHITE ON WALLS INTERIOR	<43	<0.0043	
19-03-03230-005	LBP05	WHITE ON INTERIOR WINDOW SILLS	<44	<0.0044	

Environmental Hazards Services, L.L.C

Client Number: 42-1931

Report Number: 19-03-03230

Project/Test Address: Residence @ 38 Forest Trail; Cola, SC

Lab Sample Number	Client Sample Number	Collection Location	Pb (ug/g) ppm	% Pb by Wt.	Narrative ID
-------------------	----------------------	---------------------	---------------	-------------	--------------

Preparation Method: ASTM E-1979-17

Analysis Method: EPA SW846 7000B

Accreditation #: SC 93012001

Reviewed By Authorized Signatory: 

Deborah Britt
QA/QC Clerk

The HUD lead guidelines for lead paint chips are 0.50% by Weight, 5000 ppm, or 1.0 mg/cm². The Reporting Limit (RL) for samples prepared by ASTM E-1979-17 is 10.0 ug Total Pb. The RL for samples prepared by EPA SW846 3050B is 25.0 ug Total Pb. Paint chip area and results are calculated based on area measurements determined by the client. All internal quality control requirements associated with this batch were met, unless otherwise noted.

The condition of the samples analyzed was acceptable upon receipt per laboratory protocol unless otherwise noted on this report. Results represent the analysis of samples submitted by the client. Sample location, description, area, etc., was provided by the client. Results reported above in mg/cm³ are calculated based on area supplied by client. This report shall not be reproduced except in full, without the written consent of the Environmental Hazards Service, L.L.C.

ELLAP Accreditation through AIHA-LAP, LLC (100420), NY ELAP #11714.

LEGEND	Pb= lead	ug = microgram	ppm = parts per million
	ug/g = micrograms per gram	Wt. = weight	

Project Drawing Detailing Suspect Asbestos Sample Locations

ENVIRONMENTAL CONSULTING SERVICES, INC.

INSPECTION INFORMATION FORM

7001 St. Andrews Rd PMB 425 Columbia, SC 29212

803/772-1070

FAX: 803/216-8808

CONSULTANT:

Don Cobb

LICENSE #:

22081

EOS, INC. CLIENT:

COLUMBIA HOUSING AUTHORITY (CHA) CLIENT CONTACT: H. PRIDE

PROJECT NAME:

RESIDENCE @ 38 FOREST TRAIL COLA SC

PROJ. #

2570-I

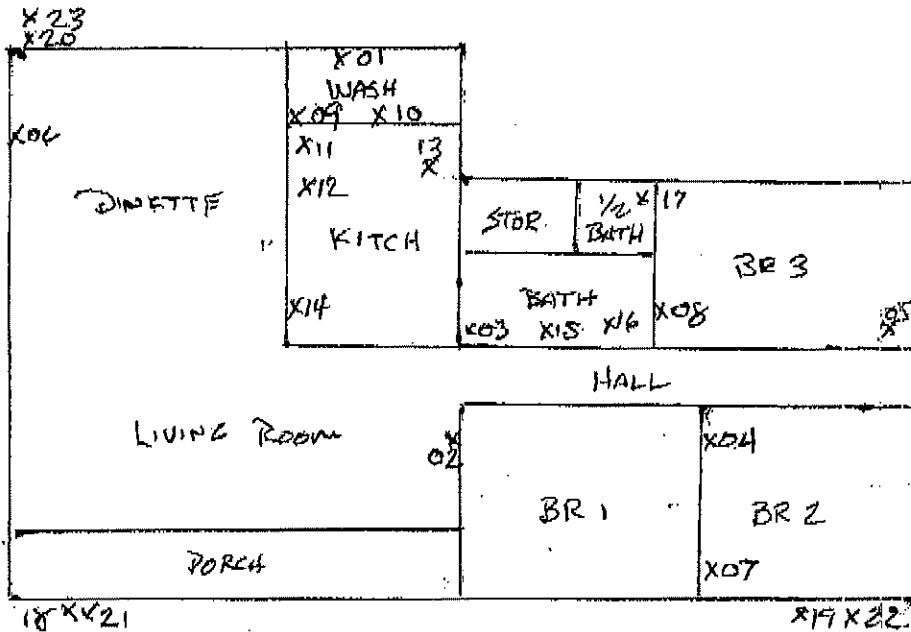
TYPE OF ANALYSIS:

REMEDIATION ASBESTOS

LEAD PAINT BULK

OTHER:

SAMPLE LOCATION/WORK AREA DRAWING:



CONSULTANT SIGNATURE:

DATE:

INSPECTOR:

Copy of Inspector's SCDHEC License

SCDHEC ISSUED

Asbestos ID Card

Donald G Cobb



	Expiration Date
AIRSAMPLER ASB-22080	01/18/20
CONSULTMP ASB-22081	01/16/20
CONSULTPD ASB-22082	02/14/20
SUPERAMERA ASB-45443	01/16/20
CONSULTBI BI-01502	01/16/20