March 28, 2019

Mr. James P. Sherry
Housing Director of Construction and Renovation
University of South Carolina
1520 Devine Street
Columbia, South Carolina 29208

Re: Asbestos Containing Materials Re-inspection/Report Update
Bates West Residence Hall
1405 Whaley Street
Columbia, South Carolina 29208
F&ME Project No.: E6200.010

Dear Mr. Sherry:

As requested, F&ME Consultants has completed a Asbestos Containing Materials (ACM) Re-inspection/Report Update for the Bates West Residence Hall located at 1405 Whaley Street in Columbia SC. The scope included preliminary discussions with USC Housing Staff, a visual re-inspection and a walk through of the interior and exterior areas of the building by F&ME personnel to review and assess the current condition of known ACM previously identified and noted in the October 2015 ACM investigation report, prepared by F&ME. In addition, field staff looked for materials that had not previously identified and for materials that may have been installed in the building since the October 2015 investigation. This investigation was requested in anticipation of a planned flooring renovation project that will begin in the summer 2019.

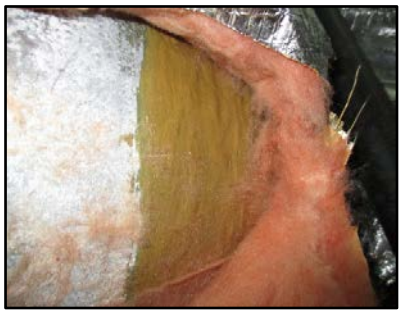
Preliminary Discussions – During initial discussions with USC Facilities and Housing Staff, it was determined that no renovations have occurred in the building since the previous investigation in 2015. However, a water line ruptured on the 2nd floor affecting room 208 that occurred on March 17, 2019. This resulted in the localized removal of the spray-applied textured ceiling material in room 208. No other abatement activities have occurred in the building.

Field Investigation - The timeline for completing the field investigation required accessing the structure while school was in session and dorm rooms were occupied by students. USC Housing provided an escort for the field personnel throughout the field investigation. The investigation included accessing one (1) randomly selected residence hall room on each level. All common areas were accessed during the investigation. No selective demolition to identify hidden building materials within closed chases or wall cavities was performed due to the building being occupied. It should be noted that identification, assessment and quantification of materials within closed spaces could not be completed and further investigation and selective demolition activities may be required prior to future renovation projects to identify hidden materials that may be encountered.

Assessment - During the field investigation, areas were noted with damage to the existing drywall walls in bathrooms found in the dorm rooms. The joint compound associated with the drywall in the building is an ACM and was found in a friable condition in these damaged areas. The drywall damage was found during the walk through in bathrooms 1008, 1101, and 1202. Also, water damage was noted to the ACM spray-applied ceiling texturing in room 1404, which was also noted to be in a friable condition. Additionally, abatement of the spray-applied ceiling texturing was recently completed in room 208 due to a ruptured water line. No other damage to ACM materials were found during this re-inspection.

Additional Homogeneous Areas/Materials (HA) - During the field investigation, two (2) additional suspect materials were uncovered that had not been previously identified and sampled during the October 2015 investigation. Three (3) samples of each of these materials were collected and submitted to the laboratory for analysis. Due to the establishment of a first stop positive protocol, three (3) samples were analyzed by PLM and one (1) sample was confirmed negative via transmissions electron microscopy (TEM) analysis. The laboratory analyses data determined that an **olive mastic, found under non-ACM fiberglass wrap insulation on the seams of the underlying metal HVAC ductwork is positive for asbestos content. This olive duct mastic has been added to the list of HA's found in the building as HA-20.**

HA-20 – Olive Mastic on Metal Duct (20 SF). Asbestos-containing olive mastic found on the seams of a metal duct in mechanical room 124 under non-ACM fiberglass wrap insulation. This material was found in a good, intact non-friable condition.



The following ACM's have been identified and/or have been assumed positive are associated with the building:

- HA-1 Spray-Applied Textured Ceiling Material
- HA-2 Joint Compound Associated with Drywall Walls and Ceilings
- HA-3 Tan Streaked 12" x 12" Floor Tile and Mastic
- HA-4 Black Mastic Associated with Foam Glass Pipe Insulation
- HA-5 White Block Pipe Insulation
- HA-6 Black Mastic on Fittings Associated with Fiberglass Pipe Insulation
- HA-7 Door Caulking – Interior Stairwell Doors
- HA-8 Tan with Orange Streaks 12" x 12" Floor Tile and Mastic
- HA-9 Tan with Brown Steaks 12" x 12" Floor Tile and Mastic
- HA-10 Light Tan 12" x 12" Floor Tile and Mastic

- HA-11 Black Mastic on Cementitious Mudded Elbows
- HA-12 Black Mastic Associated with Seams of Foam Glass Pipe Insulation
- HA-13 White Interior Door Caulking Associated with Exit Doors
- HA-14 Black Built-Up Roofing Materials
- HA-15 Black Rolled Roof Flashing
- HA-16 White Caulking on Top of Metal Counterflashing
- HA-17 Gray Louver Caulking
- HA-18 Black Roof Mastic Associated with Roof Penetrations
- HA-19 Black Rolled-on Roofing Felt

Conclusion/Recommendations - Except where noted, all other ACM materials previously listed and identified in the October 2015 investigation appear to remain in the building in the same conditions as previously noted. With the exception of the localized damage to the drywall found in the dorm room bathrooms and the spray-applied ceiling texturing noted in room 1404, no other damage was noted during the field investigation. It is important to note that access to the residence hall rooms was limited to one (1) room per floor and there is a probability that additional damage in other areas may be found where ACM is present. Therefore, it is recommended that USC Facilities, Housing and Hazmat Staff conduct an inventory of bathrooms with damaged drywall and implement an operations and maintenance program (OEM) to clean-up and repair the damaged drywall and texture ceiling materials in locations where damage is found.

If you have any questions concerning our proposed fee, or if we can provide any additional information, please feel free to contact our office at (803) 254-4540.

Sincerely,
F&ME CONSULTANTS

Mike Mincey
Asbestos Inspector/Management Planner
SCDHEC License No: MP-00161
Exp. Date: 01/21/2020

Glynn Ellen
Asbestos Consultant/Management lanner
SCDHEC License No. ASB-22641
Exp. Date: 01/21/2020

Enclosures:

1. Asbestos Analytical Results
2. Chain of Custody
3. Personnel Certifications
4. Photographs
5. Previous 2015 ACM Investigation Report

EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

Tel/Fax: (336) 992-1025 / (336) 992-4175

http://www.EMSL.com / greensborolab@emsl.com

EMSL Order:	021901904
Customer ID:	FMEC62
Customer PO:	E6200.010
Project ID:	

Attention:	Glynn M. Ellen	**Phone:**	(803) 254-4540
	F & ME Consultants	**Fax:**	(803) 254-4542
	1825 Blanding Street	**Received Date:**	03/21/2019 12:00 PM
	Columbia, SC 29201	**Analysis Date:**	03/22/2019
		Collected Date:	
Project:	Bates West ACM Report Update		

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
BW-56-1 *021901904-0001*	Brown Mastic on Metal Duct	Brown Non-Fibrous Homogeneous	<1% Cellulose 5% Glass	95% Non-fibrous (Other)	None Detected
BW-56-2 *021901904-0002*	Brown Mastic on Metal Duct	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
BW-57-1 *021901904-0003*	Olive Mastic on Metal Duct	Tan Non-Fibrous Homogeneous	<1% Cellulose 1% Glass	96% Non-fibrous (Other)	3% Chrysotile
BW-57-2 *021901904-0004*	Olive Mastic on Metal Duct				Positive Stop (Not Analyzed)

Analyst(s)

Kristie Elliott (1)

Nicole Shutts (2)

Stephen Bennett, Laboratory Manager
or Other Approved Signatory

Initial report from: 03/25/2019 08:01:23

EMSL Analytical, Inc.
706 Gralin Street Kernersville, NC 27284
Tel/Fax: (336) 992-1025 / (336) 992-4175
http://www.EMSL.com / greensborolab@emsl.com

EMSL Order: 021901904
Customer ID: FMEC62
Customer PO: E6200.010
Project ID:

Attention: Glynn M. Ellen
F & ME Consultants
1825 Blanding Street
Columbia, SC 29201

Phone: (803) 254-4540
Fax: (803) 254-4542
Received Date: 03/21/2019 12:00 PM
Analysis Date: 03/23/2019
Collected Date:

Project: Bates West ACM Report Update

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
BW-56-3 *021901904-0005*	Brown Mastic on Metal Duct	Brown Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)

Nicole Shutts (1)

Stephen Bennett, Laboratory Manager
or other approved signatory

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 03/25/2019 08:02:37

OrderID: 021901904

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number (*Lab Use Only*): 19041904

EMSL ANALYTICAL, INC
706 GRALIN ST.
KERNERSVILLE, NC 27284
PHONE: (336) 992-1025
FAX: (336) 992-4175

Company Name : F&ME Consultants		**EMSL Customer ID: FMEC62**	
Street: 3112 Devine Street		**City: Columbia**	**State/Province: SC**
Zip/Postal Code: 29205	**Country: USA**	**Telephone #: 803-254-4540**	**Fax #: 803-254-4542**
Report To (Name):		**Please Provide Results:** ☐ Fax ☒ Email	
Email Address: gellen@fmeconsultants.com, mmincey@fmeconsultants.com		**Purchase Order: E6200.010**	
Project Name/Number: Bates West ACM Report Update		**EMSL Project ID** (*Internal Use Only*):	
U.S. State Samples Taken: SC		**CT Samples:** ☐ **Commercial/Taxable** ☐ **Residential/Tax Exempt**	

EMSL-Bill to: ☒ Same ☐ Different - If Bill to is Different note instructions in Comments**

Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* – Please Check

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

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

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

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

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

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NYS 198.8 SOF-V
- ☐ NIOSH 9002 (<1%)

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

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

TEM – Water: EPA 100 2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

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

Soil/Rock/Vermiculite
- ☐ PLM EPA 600/R-93/116 with milling prep (<1%)
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
- ☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM Qualitative via Filtration Prep
- ☐ TEM Qualitative via Drop Mount Prep
- ☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM (BC only)

Other:
- ☐

☒ **Check For Positive Stop – Clearly Identify Homogenous Group**

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name: Mike Mincey **Samplers Signature:** Mike Mincey

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
*BW-56-1 to 56-3	Brown Mastic on Metal Duct		
*BW-57-1 to 57-3	Olive Mastic on Metal Duct		

Client Sample # (s): BW-56-1 - BW-57-3 **Total # of Samples:** 6

Relinquished (Client): Mike Mincey **Date:** 3/20/2019 **Time:** 17:00

Received (Lab): NS **Date:** 3/21/19 **Time:** 12:00

Comments/Special Instructions: * TEM 3rd SampleLimited

(1) EMSL FX 795609872432

Controlled Document – Asbestos COC – R10 – 05/09/2016

SCDHEC ISSUED

Asbestos ID Card

Glynn M Ellen

		Expiration Date:
SUPERAHERA	**SA-00455**	**01/22/20**
AIRSAMPLER	**AS-00079**	**01/22/20**
CONSULTPD	**PD-00098**	**06/08/19**
CONSULTMP	**ASB-22641**	**01/21/20**

This card is nontransferable and considered invalid if loaned or given to another person for identification. This card will also be invalid if altered or defaced. This card is property of SCDHEC. It must be returned to the department if the holder's accreditation is revoked or if this card is invalidated. Any person performing regulated asbestos activities without current accreditation shall be subject to legal sanction. This card must be returned upon expiration and/or issuance of a new card.

YOU MUST HAVE THIS IDENTIFICATION CARD WITH YOU ON THE JOB.

For information of corrections contact: SCDHEC – Asbestos Section
2600 Bull Street
Columbia, SC 29201
(803) 898-4289

SCDHEC ISSUED

Asbestos ID Card

Michael Mincey

		Expiration Date:
CONSULTMP	MP-00161	01/21/20
AIRSAMPLER	AS-00272	01/22/20
SUPERAHERA	SA-01424	01/22/20

This card is nontransferable and [illegible] invalid if loaned or given to another person for identification. This card will also be invalid if altered or defaced. This card is property of SCDHEC. It must be returned to the department if the holder's accreditation is revoked or if this card is invalidated. Any person performing regulated asbestos activities without current accreditation shall be subject to legal sanction. This card must be returned upon expiration and/or issuance of a new card.

YOU MUST HAVE THIS IDENTIFICATION CARD WITH YOU ON THE JOB.

For information of corrections contact:

SCDHEC – Asbestos Section
2600 Bull Street
Columbia, SC 29201
(803) 898-4289

Photo 1. Damaged ACM Drywall in Room 1008.

Photo 2. Damaged ACM Drywall in Room 1101.

Photo 3. Non-ACM Brown Mastic on Metal Duct.

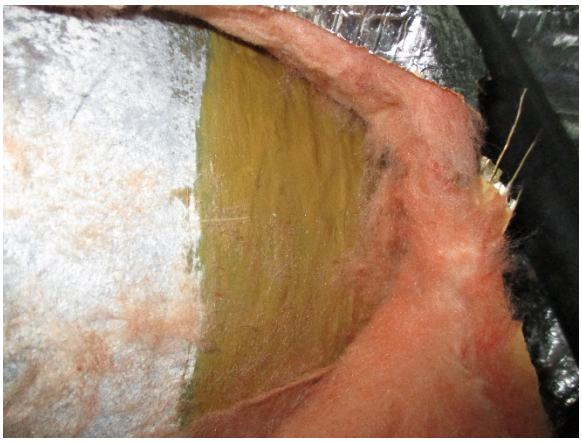


Photo 4. ACM Olive Duct Mastic under Fiberglass Insulation in 1st Floor Mechanical Room.

Photo 5.

Photo 6. ACM Foam Glass Mastic

ASBESTOS CONTAINING MATERIALS INVESTIGATION REPORT

BATES WEST RESIDENCE HALL

1405 WHALEY STREET

COLUMBIA, SOUTH CAROLINA

PREPARED FOR

UNIVERSITY OF
SOUTH CAROLINA

University of South Carolina
743 Green Street
Columbia, South Carolina 29208

PREPARED BY:

F&ME Consultants
3112 Devine Street
Columbia, South Carolina 29205
(803) 254-4540

October 27, 2015

E5550.05

TABLE OF CONTENTS

I. EXECUTIVE SUMMARY

As requested, F&ME Consultants has completed the Asbestos Containing Materials (ACM) investigation of the Bates West Residence Hall located at 1405 Whaley Street in Columbia, South Carolina. This investigation was conducted in accordance with SCDHEC, USEPA, and OSHA regulations.

It is our understanding that as a component of the University of South Carolina's Campus Village Project (Project) the Bates West Residence Hall will be completely demolished. The purpose of this investigation was to identify ACM that will require abatement prior to the planned demolition of the subject structure.

The scope of this ACM investigation was to identify, sample and assess materials suspected of containing asbestos within the interior and exterior of the structure. Suspect materials identified during the investigation associated with the existing roofing system were reviewed and inventoried but were not sampled. Roofing materials were assumed positive and will require sampling prior to development of abatement design documents and prior to the demolition of the structure. The field investigation was performed starting on September 29, 2015 and ending on October 13, 2015.

The schedule required that the investigation of the structure be conducted while school was in session. The investigation included accessing two (2) randomly selected dormitory rooms on each level. All common areas were accessed during the investigation. No selective demolition to identify hidden building materials within closed chases or wall cavities was performed due to the building being occupied. It should be noted that identification, assessment and quantification of materials within closed spaces could not be completed and further investigation and selective demolition activities will be required during the design development phases of this project to identify those hidden materials in order to avoid delays and change orders during abatement and demolition operations.

Furthermore, due to the age of the subject building, there may be components such as electrical panels, fire doors, elevator doors and associated braking systems, etc., which could contain suspect ACM. Due to the inaccessibility of these types of building components and destructive nature of bulk sampling, they were not included during this investigation. The ACM associated with these components may or may not be present within them. However, it is important to understand that further investigations of these systems will be required during the design development stages of the Project to verify whether they are ACM. These investigations must be completed prior to the demolition of the structure.

In addition, only the main housing structure was included as part of this investigation. Out structures such as the pedestrian crosswalk to the Blatt PE Center hidden materials which may be found underground (utilities, waterproofing materials for retaining walls structures and foundation elements) were not included in this investigation. Efforts during the design development phase of the project should be implemented to identify ACM associated with these structures and underground elements. Contingencies should be included to address these items during site development and demolition activities.

The investigation of the subject structure identified numerous suspect materials. Prior to our investigation University HAZMAT personnel provided information regarding specific materials that had already been found through laboratory analysis to be ACM. This included spray applied textured ceiling material and joint compound associated with the existing drywall wall systems throughout the building. These materials were not sampled during this investigation. Of the materials analyzed, laboratory results indicate that the spray-applied ceiling texture, the joint compound associated with drywall walls and ceilings, various floor tiles and associated mastics, black mastic associated with foam glass insulation on chilled water and steam lines, white block pipe insulation, black mastic on fittings and joints associated with fiberglass pipe insulation, interior door caulking on exit doors and stairwells, and overspray found on various surfaces above suspended and hard ceilings. Attached is the report of our findings.

It should be noted that a sample taken of tile mastic within the structure obtained a <1% result for asbestos content. Though based on the SCDHEC regulations materials <1% are deemed non-asbestos, it is however considered an ACM by the OSHA regulations. Therefore, this material should be considered during the design development phases of the project, specifically those activities associated with preparations for the demolition of the structure (i.e. planting of explosives) where workers will possibly come in contact with this material. Worker protection should be addressed to ensure that those workers are not exposed during these activities.

We sincerely appreciate the opportunity to assist you with this project. Should you have any questions or require additional information concerning this limited investigation, please do not hesitate to contact our office at (803) 254-4540.

Sincerely,

F&ME CONSULTANTS

James T. Timmons
Environmental Professional
Asbestos Consultant/ Management Planner
SCDHEC License No: MP-00196
Expiration Date 02/25/2016

Glynn M. Ellen
Environmental Manager
Asbestos Consultant/ Management Planner
SCDHEC License No: ASB-22641
Expiration Date 02/25/2016

II. INTRODUCTION

As requested, F&ME Consultants has completed the Asbestos Containing Materials (ACM) investigation of the Bates West Residence Hall located at 1405 Whaley Street in Columbia, South Carolina. This investigation was conducted in accordance with SCDHEC, USEPA, and OSHA regulations.

It is our understanding that as a component of the University of South Carolina's Campus Village Project (Project) the Bates West Residence Hall will be completely demolished. The purpose of this investigation was to identify ACM that will require abatement prior to the planned demolition of the subject structure.

The scope of this ACM investigation was to identify, sample and assess materials suspected of containing asbestos within the interior and exterior of the structure. Suspect materials identified during the investigation associated with the existing roofing system were reviewed and inventoried but were not sampled. Roofing materials were assumed positive and will require sampling prior to development of abatement design documents. The field investigation was performed on multiple days starting on September 29, 2015 and ending on October 13, 2015.

The results, conclusions and recommendations from this investigation are representative of the conditions observed at the site on the dates of the field inspection. F&ME does not assume responsibility for any changes in conditions or circumstances that occur after the inspection. Use of this document for bidding purposes is not recommended without prior consultation with F&ME.

III. INVESTIGATION RESULTS

The purpose of this investigation was to locate, sample and record the physical characteristics of suspect ACM associated with the interior and exterior portions of the subject structure. Therefore, the quantities and physical condition of suspect materials were assessed and bulk samples of these materials were submitted for laboratory analysis.

Due to the schedule requiring that the investigations be completed and they be conducted while school was in session only limited access to dormitory rooms was granted. Two dormitory rooms were accessed on each of the floors. All common areas (mechanical/electrical, custodial, corridors) were accessed during the investigation. Destructive measures were not allowed during this investigation to locate hidden building materials within closed chases or wall cavities due to the building being occupied. It should be noted that efforts were made during this investigation to gather information to identify areas where hidden materials may be found. However, identification, assessment and quantification of materials within these closed spaces could not be completed and further investigation and selective demolition activities will be required during the design development phases of this project to identify those hidden materials in order to avoid delays and change orders during abatement and demolition of the structure.

The subject building is a fourteen (14) story concrete and steel structure utilized as housing for University students. The first and second floors are a mixture of common areas, mechanical rooms and residence rooms. The third through fourteenth floors are typical repeating floors made

up of one (1) and two (2) bedroom residence rooms. Mechanical rooms are located in the four (4) corners of the main corridor. The mechanical system is a four (4) pipe hot and chilled water supply and return system. The main supply and return lines to Bates West feed from main mechanical room over from Bates House. These main lines supply the various mechanical rooms, laundry rooms and bathrooms on the first and second floors then feed up through the walls, floors and closed chases to the four (4) mechanical rooms on typical repeating floors 3 through 14. Each of the mechanical rooms house two (2) HVAC units that feed each of the four (4) quadrants of the typical repeating dormitory floors. HVAC fresh make up air is provided from the basement mechanical up to each floor through ductwork located in a chase in the stairwell. There is a central concrete core that houses the three (3) elevators and the stairwells. The exterior of the structure is a combination of concrete and stucco materials.

Interior finishes within this space include drywall wall and ceilings, spray-applied ceiling texture ceiling material on drywall ceilings, masonry block and brick walls, suspended ceilings, various types of floor finishes, concrete floors, vinyl baseboard and carpeting. The roof system was noted to be a built-up roofing system. When accessing the areas above the proposed renovation area, only the ceiling joist framing and the upper surfaces of the ceiling system were observed.

Suspect materials identified during this investigation included the following:

- Mudded elbows and joints associated with fiberglass pipe Insulation (800 S.F.)
- Tan streaked 12”x 12” floor tile and associated mastic (150 S.F)
- Black 12”x 12” floor tile and associated mastic (375 S.F.)
- Red 12”x 12” floor tile and associated mastic (375 L.F.)
- Various suspended ceiling tiles (>10,000 S.F.)
- Multiple cove bases and associated mastics (>20,000 L.F.)
- White sink undercoating (~5 S.F.)
- Green firestop caulking (~500 S.F.)
- Red firestop caulking (~500 S.F.)
- Black expansion joint compound (~500 L.F.)
- Black mastic associated with foam glass pipe insulation (>2,000 S.F.)
- White block pipe insulation (>2,000 L.F.)
- Mudded elbows and joints associated with white block pipe insulation (>800 S.F.)
- Black mastic associated with fiberglass pipe insulation (>1,000 S.F.)
- White duct mastic on heater exhaust (25 S.F.)
- Pink firestop caulking (~300 S.F.)
- Interior door caulking (~500 L.F.)
- White duct mastic (100 S.F.)
- Tan w/ orange streaks 12”x 12” floor tile and associated mastic (150 S.F.)
- Carpet mastic (>50,000 S.F.)

- Tan streaked 12”x 12” floor tile (new) and associated mastic (~6,000 S.F.)
- White streaked 12”x 12” floor tile and associated mastic (~150 S.F.)
- Exterior gray door caulking (100 L.F.)
- White endcap mastic associated with fiberglass pipe insulation (~400 S.F.)
- Black vapor barrier felt (>5,000 S.F.)
- Gold ceramic tile mastic (~1,000 S.F.)
- Grey mastic on metal ductwork (~500 S.F.)
- Canvas wrap on blue painted pipe insulation (>500 L.F.)
- Tan w/ brown streaks 12”x 12” floor tile and associated mastic (~400 S.F.)
- Light tan 12”x 12” floor tile and associated mastic (~450 S.F.)
- Black mastic on cementitious pipe elbows (>500 S.F.)
- Floor leveling compound (180 S.F.)
- Black mastic associated with seams of foam glass pipe insulation (~3500 L.F.)
- White pipe flange mastic (~20 S.F.)
- Tan exterior skim coat on walls (>10,000 S.F.)
- Black exterior window glazing (~500 L.F.)
- Grey exterior stucco (>12,000 S.F.)
- White exterior door caulking (~60 L.F.)
- Back door-window glazing (25 L.F.)
- White exterior window caulking (>5,000 L.F.)
- Grey expansion joint compound (~25 L.F.)
- White exterior stucco (>5,000 S.F.)
- White interior door caulking (~50 L.F.)

Remaining building materials (i.e. concrete, metal, wood, brick, carpet, etc.) were not considered suspect.

Bulk samples of suspect materials were analyzed by Polarized Light Microscopy (PLM) in accordance with EPA 600/R-93/116. Confirmation Transmission Electron Microscopy (TEM) was also performed on any non-friable organically bound materials that tested negative for asbestos content as per SCDHEC regulations effective May 27, 2011. A “first-positive stop” protocol was also requested, meaning that if a sample of a material was found to contain asbestos, then subsequent samples of that same material were not analyzed. Proper sampling and chain-of-custody protocol were followed to ensure appropriate handling and delivery of samples to the analytical laboratory. See Appendix A for the Sample Location Plan (Figure 2).

A total of one hundred and seventy-six (176) bulk samples were collected from the subject structure. Due to multiple layering of some materials and implementation of the “first-positive stop” protocol, one hundred forty-six (146) samples were analyzed by PLM and thirty-eight (38) were TEM-confirmed. Of the materials analyzed, laboratory results indicate that the spray-

applied ceiling texture, the joint compound associated with drywall walls and ceilings, various floor tiles and associated mastics, mastic associated with foam glass insulation on chilled water lines, white block pipe insulation, black mastic associated with fiberglass pipe insulation, interior door caulking and overspray found on various surfaces (also see Table II, Summary of Asbestos Containing Materials). For more information regarding the location of these materials, refer to the Homogeneous Area Plan (Figure 3) located in the appendix.

The Appendices include a Site Vicinity Map (Figure 1), General Building Plans (Figures 2 – 9) Sample Location Plans (Figures 10 - 16), Homogeneous Area Plans (Figures 17 - 24), a Summary of Samples (Table I), a Summary of Asbestos Containing Materials (Table II), Physical Assessment Data Sheets, Bulk Asbestos Analytical Reports, the Chain of Custody, Personnel Certifications, a SCDHEC Regulation Summary and SCDHEC Abatement Project Forms.

IV. ACM DESCRIPTION & ASSESSMENT

The following items are descriptions and quantities of the asbestos-containing materials identified during this investigation (See Figure 3, Homogeneous Area Plan):

- HA-1 – Spray Applied Textured Ceiling Material (~65,000 S.F.)

  Asbestos-containing spray-applied ceiling texture is located on the ceilings in multiple areas throughout the building. Overall this material is intact with little damage being noted. Overspray was noted above suspended ceilings in the main lobby and office on the second floor. It appeared that an original drywall ceiling in this area was removed and replaced with suspended ceilings during a past renovation. It should be noted that this occurrence would indicate that overspray will be found in all area where textured ceilings are present above hard ceilings, within closed chases and within the interior of wall cavities. During development of abatement design efforts should be taken to identify and address removal of overspray in hidden areas. Prior to demolition activities, this material must be removed and disposed of as ACM by a licensed abatement contractor.

Photo 1. Asbestos-containing spray-applied ceiling texture located in various rooms of the structure.

- HA-2 – Joint Compound Associated with Drywall Walls and Ceilings (>300,000 S.F.)

  ACM joint compound associated with drywall walls and ceilings is found throughout the building on all floors (see Homogeneous Area Plan). Both the drywall and the ACM joint compound are in an intact and good condition with little damage being noted. Prior to demolition activities, all drywall wall and ceiling systems throughout the building must be removed and disposed of as ACM by a licensed abatement contractor.

Photo 3. Asbestos-containing joint compound associated with drywall ceilings and walls are located in various rooms of the structure.

- HA-3 –Tan Streaked 12” x 12” Floor Tile and Mastic (~150 S.F.)

  Asbestos-containing ACM tan streaked 12” x 12” floor tile was observed in several locations in the building (see Homogeneous Area Plan). Where observed these materials were noted to be intact and in a good non-friable condition. Prior to demolition activities, this material must be removed and disposed of as ACM by a licensed abatement contractor.

Photo 4. Asbestos-containing tan streaked 12” x 12” floor tile and associated mastic was observed in numerous locations throughout the building.

- HA-4 – Black Mastic Associated with Foam Glass Pipe Insulation (~2,000 S.F.)

  Asbestos-containing black mastic associated with cellular foam glass pipe insulation was observed throughout the building (see Homogeneous Area Plan). Where observed this material was noted to be in good condition. Prior to demolition activities, this material must be removed and disposed of as ACM by a licensed abatement contractor. It should be noted that abatement of ACM black mastic will require disposal of foam glass as ACM. Residual black mastic on piping should be anticipated.

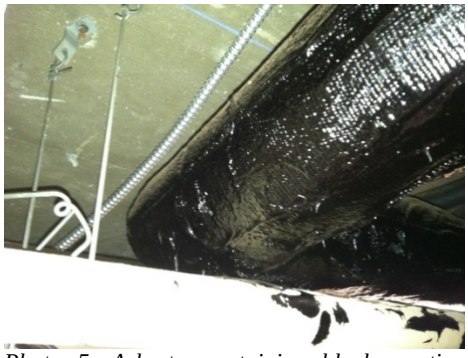


Photo 5. Asbestos-containing black mastic associated with black foam glass pipe insulation was observed in various locations throughout the building.

- HA-5 – White Block Pipe Insulation (>2,000 L.F.)

  ACM white block pipe insulation was observed in numerous locations throughout the building (see Homogeneous Area Plan). This material was found in wall and floor penetrations in all mechanical rooms on all floors. This material will be found and anticipated in closed chases and wall cavities throughout the building. Where observed this material was noted to be mostly an intact condition. However, exposed unwrapped ends with some localized damage were noted in mechanical rooms where previous abatement had terminated and was friable. Prior to demolition activities, this material must be removed and disposed of as ACM by a licensed abatement contractor.

Photo 6. Asbestos-containing .white block pipe insulation was obsrved in various locations throughout the building.

- HA-6 – Black Mastic on Fittings Associated with Fiberglass Pipe Insulation (>1,000 S.F.)

  Asbestos-containing black mastic on fittings associated with fiberglass pipe insulation was observed throughout the building (see Homogeneous Area Plan). Where observed this material was noted to be in good non-friable condition. Prior to demolition activities, this material must be removed and disposed of as ACM by a licensed abatement contractor.

Photo 7. Asbestos-containing black mastic on fiberglass elbows was observed throughout the building.

- HA-7 – Door Caulking - Interior Stairwell Doors (~800 L.F.)

  ACM door caulking was noted on all stairwell doors on all floors of the building (see Homogeneous Area Plan). Where observed this material was noted to be in good non-friable condition. Prior to demolition activities, this material must be removed and disposed of as ACM by a licensed abatement contractor.

Photo 8. Asbestos-containing interior door caulking. All stairwell doors throughout the building.

- HA-8 – Tan with Orange Streaks 12” x 12” Floor Tile and Mastic (~150 S.F.)

  Asbestos-containing tan with orange streaks 12” x 12” floor tile and associated mastic was located in numerous locations throughout the building (see Homogeneous Area Plan). Overall, this material was in an intact non-friable condition, but showed evidence of wear and deterioration from age. Prior to demolition activities, this material must be removed and disposed of as ACM by a licensed abatement contractor.

Photo 9. Asbestos-containing white overspray material was observed above the suspended ceiling tile system in the front lobby section of the building.

- HA-9 – Tan with Brown Streaks 12” x 12” Floor Tile and Associated Mastic (~400 S.F.

  Asbestos-containing tan with brown streaks 12” x 12” floor tiles and associated mastic was observed in numerous locations throughout the building (see Homogeneous Area Plan). Where observed these materials were noted to be in good non-friable condition. Prior to demolition activities, this material must be removed and disposed of as ACM by a licensed abatement contractor.

Photo 10. . Asbestos-containing tan with brown streaks 12” x 12” floor tile and associated mastic were observed in numerous locations throughout the building.

- HA-10 – Light Tan 12” x 12” Floor Tile and Associated Mastic (~450 S.F.)

  Asbestos-containing light tan streaked 12” x12” floor tile and associated mastic were observed in numerous locations throughout the building (see Homogeneous Area Plan). Overall, this material was in an intact non-friable condition, but showed evidence of wear and deterioration from age. Prior to demolition activities, this material must be removed and disposed of as ACM by a licensed abatement contractor.

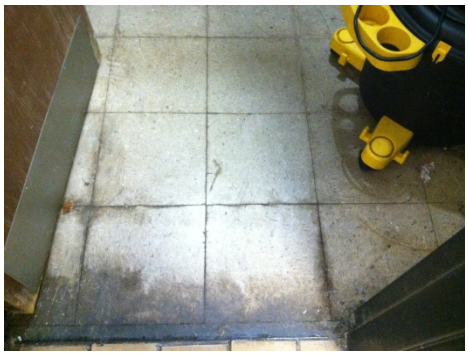


Photo 11. ACM light tan 12” x12” floor tile and associated mastic was observed in numerous locations throughout the building.

- HA-11 – Black Mastic on Cementitious Mudded Elbows (>500 S.F.)

  Asbestos-containing black mastic on cementitious elbows was observed throughout the building (see Homogeneous Area Plans). Where observed this material was noted to be in a good non-friable condition. It should be noted that removal of this black mastic along with the cementitious mudded elbows will require friable abatement methods. Prior to demolition activities, this material must be removed and disposed of as ACM by a licensed abatement contractor.

Photo 12. Asbestos-containing black mastic associated with the seams of foam glass TSI was observed throughout the building.

- HA-12 Black Mastic Associated with Seams of Foam Glass Pipe Insulation (~3,500 L.F.)

  ACM black mastic was noted on seams of cellular foam glass pipe insulation. This material was utilized to hold foam glass form fitted sections together during the insulation of hot and chilled water lines. This material was observed above suspended ceilings and in mechanical rooms throughout the building (sees Homogeneous Area Plan). It should be noted that separation of this material from the foam glass may not be cost effective. Therefore, removal and disposal of the foam glass as ACM should be anticipated in the abatement design. Where observed this material was in an intact non-friable condition. Prior to demolition activities, this material must be removed and disposed of as ACM by a licensed abatement contractor.

Photo 13. Asbestos-containing black mastic associated with the seams of foam glass TSI was observed throughout the building.

- HA-13 – White Interior Door Caulking Associated with Exit Doors (~50 L.F.)

  Asbestos-containing interior door caulking was observed on the first floor level associated with the side exit doors (see Homogeneous Area Plans). Where observed this material was noted to be in good intact non-friable condition. Prior to demolition activities, this material must be removed and disposed of as ACM by a licensed abatement contractor.

Photo 14. Asbestos-containing white interior door caulking was observed to be associated with the first floor exit doors.

- HA-14 – Black Built-up Roofing Materials (Assumed) (~8,000 S.F.)

  Built-up roofing materials associated with the main roof and penthouse structure were not sampled during this investigation due to the schedule. Therefore, for the purposes of this report all roofing materials are assumed positive for asbestos content. Samples of roofing materials should be collect during additional investigations or during design development phases of the project. Where observed this material was noted to be in good intact non-friable condition. Prior to demolition activities, this material must be sampled for asbestos content.

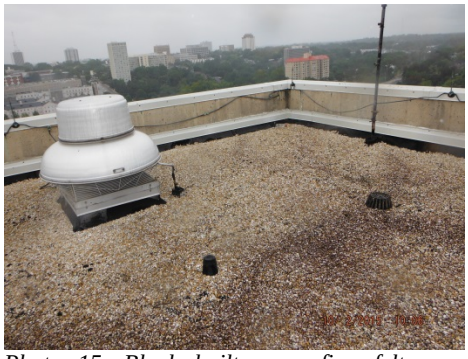


Photo 15. Black built-up roofing felt was observed on the main roof level as well as the elevator machine rooftop level.

- HA-15 – Black Rolled-on Roof Flashing (Assumed) (~500 S.F.)

  Black rolled-on roof flashing was observed along the perimeter and along the base of the elevator machine room on the main roof level. (see Homogeneous Area Plans). Where observed this material was noted to be in good intact non-friable condition. For the purposes of this report this material is assumed positive for asbestos content. Prior to demolition activities, this material must be sampled for asbestos content.

Photo 16 Black rolled-on roof flashing was observed along the perimeter and along the base of the elevator machine room on the main roof level.

- HA-16 – White Caulking at Top of Metal Counterflashing (Assumed) (~500 L.F.)

  White caulking was observed to be associated with the perimeter counterflashing at top of all flashing found on both the main roof and the penthouse roof (see Homogeneous Area Plans). Where observed this material was noted to be in an intact non-friable condition. For the purposes of this report this material is assumed positive for asbestos content. Prior to demolition activities, this material must be sampled for asbestos content.

Photo 17. White roof cap caulking was observed to be associated with the perimeter of all roof levels.

- HA-17 – Gray Louver Caulking (Assumed) (~25 L.F.)

  Gray louver window caulking was observed on the side of the elevator machine room on the main roof level (see Homogeneous Area Plans). Where observed this material was noted to be in good intact non-friable condition. For the purposes of this report this material is assumed positive for asbestos content. Prior to demolition activities, this material must be sampled for asbestos content.

Photo 18. Gray louver caulking was observed on the side of the elevator machine room on the main roof level.

- HA-18 – Black Roof Mastic Associated with Roof Penetrations (Assumed) (~250 S.F.)

  Black roof mastic associated with all roof penetrations was observed on the main roof level. (see Homogeneous Area Plans). Where observed this material was noted to be in good intact non-friable condition. For the purposes of this report this material is assumed positive for asbestos content. Prior to demolition activities, this material must be sampled for asbestos content.

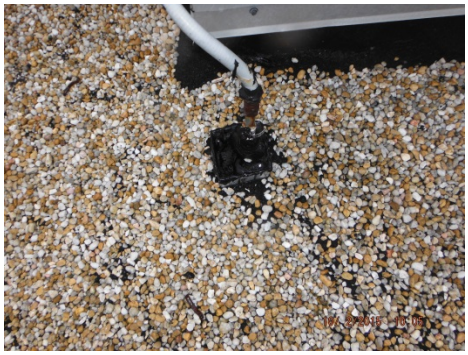


Photo 20. Black roof mastic associated with all roof penetrations on main roof level.

- HA-19 – Black Rolled-on Roofing Felt (Assumed) (~300 S.F.)

  Black rolled-on roofing felt was observed to be associated with the front overhang roofing system (see Homogeneous Area Plan). Where observed this material was observed to be in good condition. For the purposes of this report this material is assumed positive for asbestos content. Prior to demolition activities, this material must be sampled for asbestos content.

Photo 21. Black rolled-0n roofing felt was observed to be associated with the front overhang roofing system.

Asbestos containing materials are categorized by SCDHEC as friable (a.k.a. regulated asbestos containing materials, or RACM), Category I non-friable ACM (packing, gaskets, floor coverings, asphalt roofing products, etc.) and Category II non-friable ACM (other non-friable materials not covered in Category I). SCDHEC regulates any disturbances of friable/RACM, requiring its removal prior to renovation or demolition activities.

SCDHEC also legally tracks the dumping of all ACM into landfills. Therefore, SCDHEC must be notified prior to abatement and demolition projects in order to arrange for the proper disposal of ACM and associated contaminated debris. Most landfills will not accept ACM or asbestos-contaminated debris. This is an important consideration for the owner because it is more expensive to dispose of ACM than normal debris. If the abatement/ demolition contractor selects a landfill that accepts ACM, the entire load of abatement/ demolition debris could be transported to the permitted landfill. However, since the ACM would be mixed in with the total demolition debris, all of the debris would be considered to be ACM resulting in higher disposal costs. Therefore, it is recommended that removal of all asbestos is conducted prior to and separate from building demolition activities.

Unlike SCDHEC, OSHA does not distinguish between friable and non-friable ACM, regulated and non-regulated ACM, and/or ACM in good condition versus ACM in poor/damaged condition. Instead, OSHA regulates all worker contact with asbestos.

This report has been prepared exclusively for the University of South Carolina, and shall not be disseminated in whole or part to other parties without prior consent from the University of South Carolina or F&ME Consultants, Inc. No other environmental issues are addressed in this report.

V. RECOMMENDATIONS

It is our understanding that the structure is to be demolished as a part of the proposed Campus Village Project. Based on the current condition and types of ACM identified, all ACM associated within the interior and exterior of the subject structure must be abated prior to the start of demolition operations. Based upon or understanding of the materials and requirements for abatement it would be prudent to anticipate using friable abatement practices, to include full negative air containment of independent floors and/ or the entire structure. The quantities of the friable ACM to be abated fall above SCDHEC's requirement for an abatement design.

All abatement work must be performed by an AHERA-certified and SCDHEC-licensed Abatement Contractor. This work must be performed in accordance with all applicable regulations and guidelines, such as notification and air monitoring requirements (see below for a summary). Additionally, due to the recognized historic significance of the structure, it is recommended that any abatement activities be performed in a manner that preserves the integrity of the historic nature of the subject structure.

If any concealed and/or inaccessible ACM are encountered during asbestos abatement or renovation activities, the affected contractor(s) must stop work, take appropriate actions, and notify the Owner/ Abatement Contractor/ Asbestos Consultant for an appropriate response action. The SCDHEC must be notified in the event that any additional ACM is discovered, as well as changes in the condition of identified ACM.

All asbestos waste, including contaminated building materials (i.e. non-ACM drywall), must be deposited in a landfill permitted by the SCDHEC for receiving ACM.

The SCDHEC's Standards of Performance for Asbestos Projects (R 61-86.1) includes requirements for abatement projects regarding notifications, project design, air sampling and analysis, etc. For informational purposes, some of these requirements are summarized below:

Notifications. Written notification (SCDHEC Form 3430) must be submitted to SCDHEC at least two (2) calendar weeks prior to initiation of abatement activities for renovation/demolition projects. A copy of this inspection report and applicable fee payment must be attached to the notification. Additional fees may be required. Copies of all notifications and documents pertinent to the abatement operations must be posted on the job site during abatement work. The Owner/Operators must notify all parties involved with this project of the nature of the work as well as the locations and quantities of asbestos materials to be disturbed or those located near demolition/removal work areas. This notification requirement is also extended to any persons/employees who work near the demolition/removal work areas.

Project Design. Furthermore, abatement projects that will remove more than 3,000 square, 1,500 linear or 656 cubic feet of regulated asbestos-containing materials are required to have a licensed and certified Abatement Project Designer develop a project design prior to the commencement of any abatement activities. The Abatement Contractor is required to adhere to the design, which must address all information as directed by the regulations.

Air Monitoring. The Abatement Contractor is responsible for daily personal air sampling for Abatement Workers in compliance with current OSHA standard 29 CFR 1926.1101. All remaining air monitoring services required for a renovation project (i.e. backgrounds, areas, and clearances) will be provided by the Owner or the Owner's Representative, as required by SCDHEC.

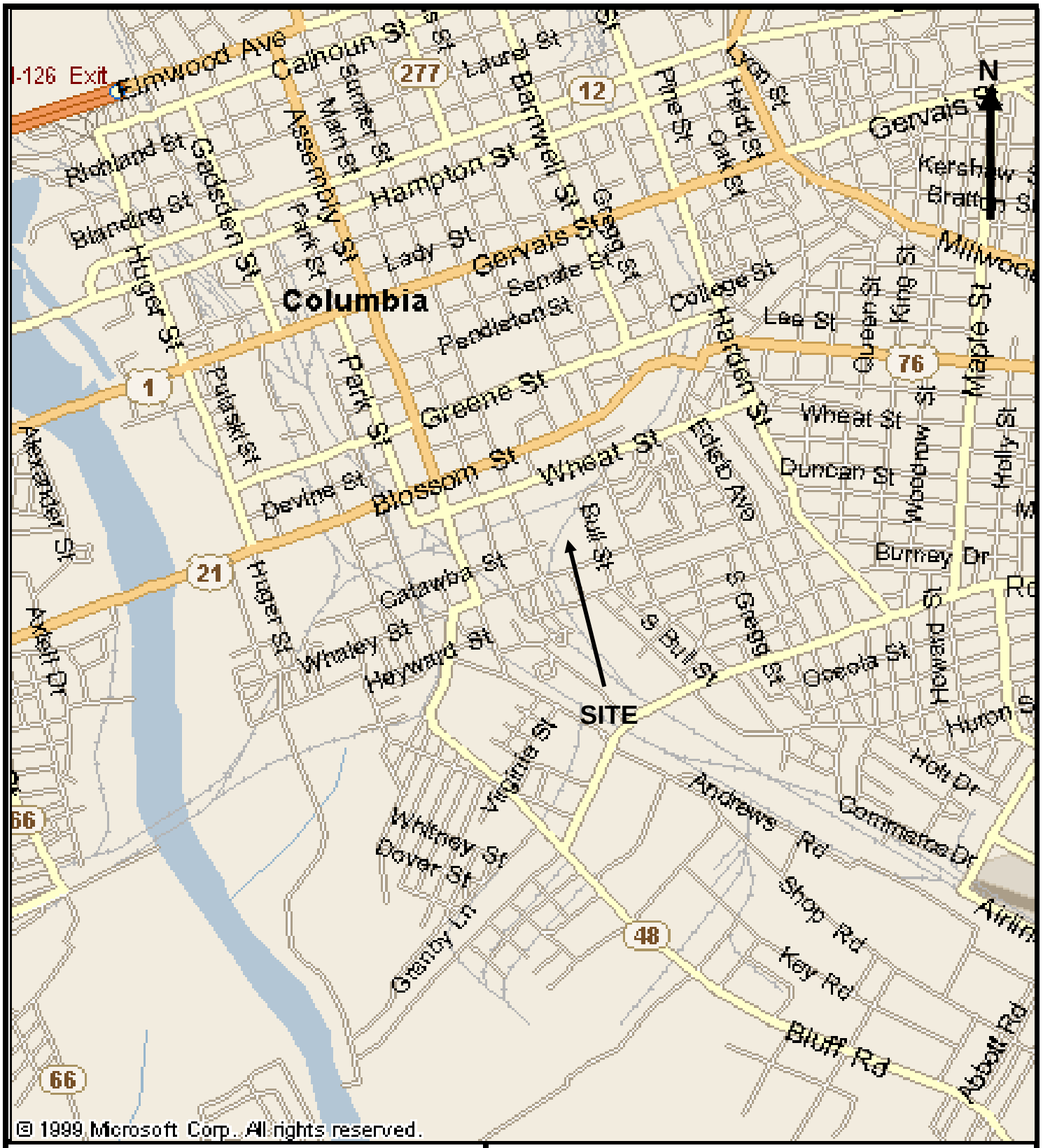
APPENDIX A

Site Vicinity Map (Figure 1)

General Building Plans (Figures 2 thru 9)

Sample Location Plans (Figures 10 thru 16)

Homogeneous Areas Plans (Figure 17 thru 24))



F&ME CONSULTANTS

SITE VICINITY MAP
USC Bates West Residence Hall
Columbia, South Carolina

UNIVERSITY OF SOUTH CAROLINA

Prepared By:	**JSL**	**Scale:**	**N.T.S.**
Checked By:	**GME**	**Project:**	**G5550.050**
Approved By:	**GME**	**Figure:**	**1**

N

1 A1 FIRST FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

N

1 A2 SECOND FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

DRWN. BY: GME
CHKD. BY: JTT
APPR. BY: GME
NOTES:
REVISIONS: 1 2 3
ORIGINAL:
SCALE 1" = 20'

F&ME CONSULTANTS
GEOTECHNICAL - ENVIRONMENTAL - MATERIALS
COLUMBIA, SOUTH CAROLINA

GENERAL BUILDING PLAN

University of South Carolina

BATES WEST RESIDENCE HALL
1405 WHALEY STREET
Columbia, South Carolina
USC Project Number: H27-2247

F&ME CONSULTANTS PROJECT NUMBER: E5550.05

FIGURE NUMBER: #2

N

1/A3 THIRD FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

N

1/A4 FOURTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

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COLUMBIA, SOUTH CAROLINA

ORIGINAL:

REVISIONS:

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DRWN. BY: GME

CHKD. BY: JTT

APPR. BY: GME

NOTES:

SCALE

1" = 20'

GENERAL BUILDING PLAN

University of South Carolina

BATES WEST RESIDENCE HALL
1405 WHALEY STREET
Columbia, South Carolina
USC Project Number: H27-2247

F&ME CONSULTANTS PROJECT NUMBER:

E5550.05

FIGURE NUMBER:

#3

N

1/A5 FIFTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

N

1/A6 SIXTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

DRWN. BY: GME
CHKD. BY: JTT
APPR. BY: GME
NOTES:

ORIGINAL:
REVISIONS: 1 2 3
SCALE 1" = 20'

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FIGURE NUMBER: #4

N

1 A7 SEVENTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

N

1 A8 EIGHTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

DRWN. BY: GME
CHKD. BY: JTT
APPR. BY: GME
NOTES:

ORIGINAL:
REVISIONS: 1 2 3
SCALE 1" = 20'

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GENERAL BUILDING PLAN

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Columbia, South Carolina
USC Project Number: H27-Z247

F&ME CONSULTANTS PROJECT NUMBER: E5550.05

FIGURE NUMBER: #5

N

1 A9 NINTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

N

1 A10 TENTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

DRWN. BY: GME
CHKD. BY: JTT
APPR. BY: GME
NOTES:

ORIGINAL:
REVISIONS: 1 2 3
SCALE 1" = 20'

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GENERAL BUILDING PLAN

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USC Project Number: H27-2247

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FIGURE NUMBER: #6

N

1 A11 ELEVENTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

N

1 A12 TWELFTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

DRWN. BY: GME
CHKD. BY: JTT
APPR. BY: GME
NOTES:

ORIGINAL:
REVISIONS: 1 2 3

SCALE 1" = 20'

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GENERAL BUILDING PLAN

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USC Project Number: H27-2247

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FIGURE NUMBER: #7

N

1 A13 THIRTEENTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

N

1 A14 FOURTEENTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

ORIGINAL:

REVISIONS:
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DRWN. BY: GME
CHKD. BY: JTT
APPR. BY: GME

NOTES:

SCALE
1" = 20'

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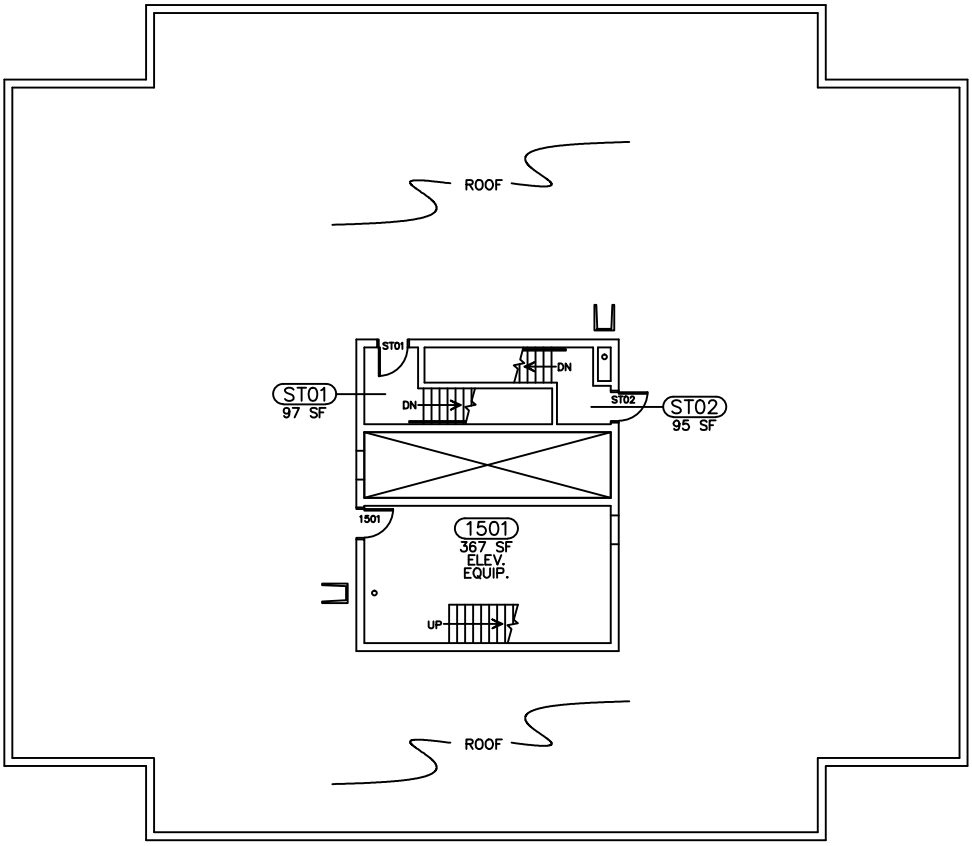
USC Project Number: H27-2247

F&ME CONSULTANTS PROJECT NUMBER:
E5550.05

FIGURE NUMBER:
#8



N

1 / A15 PENTHOUSE FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

F&ME CONSULTANTS	GENERAL BUILDING PLAN BATES WEST RESIDENCE HALL COLUMBIA, SOUTH CAROLINA		
UNIVERSITY OF SOUTH CAROLINA	DRAWN BY: GME CHECKED BY: JTT APPROVED BY: GME	SCALE: 1"=20' PROJECT: E5550.05 FIGURE: 9	

1 A1 FIRST FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

1 A2 SECOND FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

ORIGINAL:

REVISIONS:
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DRWN. BY: GME
CHKD. BY: JTT
APPR. BY: GME

NOTES:

SCALE
1" = 20'

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SAMPLE LOCATION PLAN

University of South Carolina

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1405 WHALEY STREET
Columbia, South Carolina
USC Project Number: H27-Z247

F&ME CONSULTANTS PROJECT NUMBER:
E5550.05

FIGURE NUMBER:
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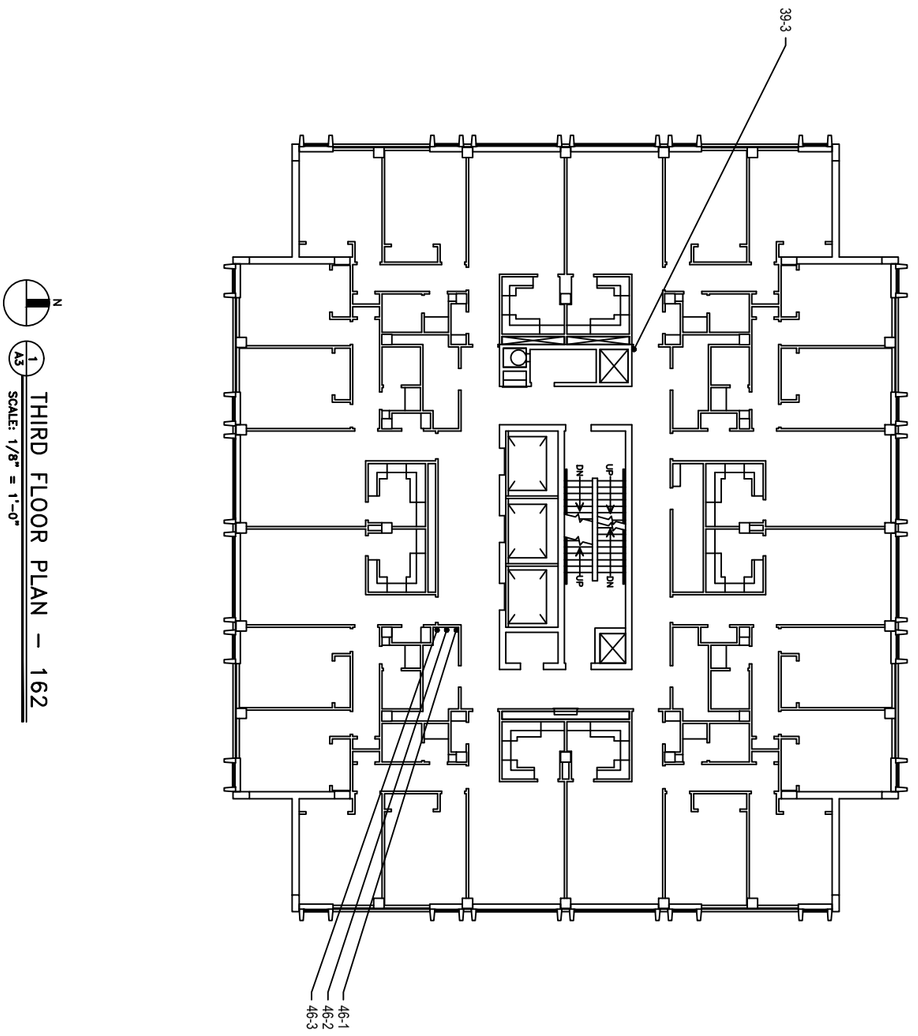

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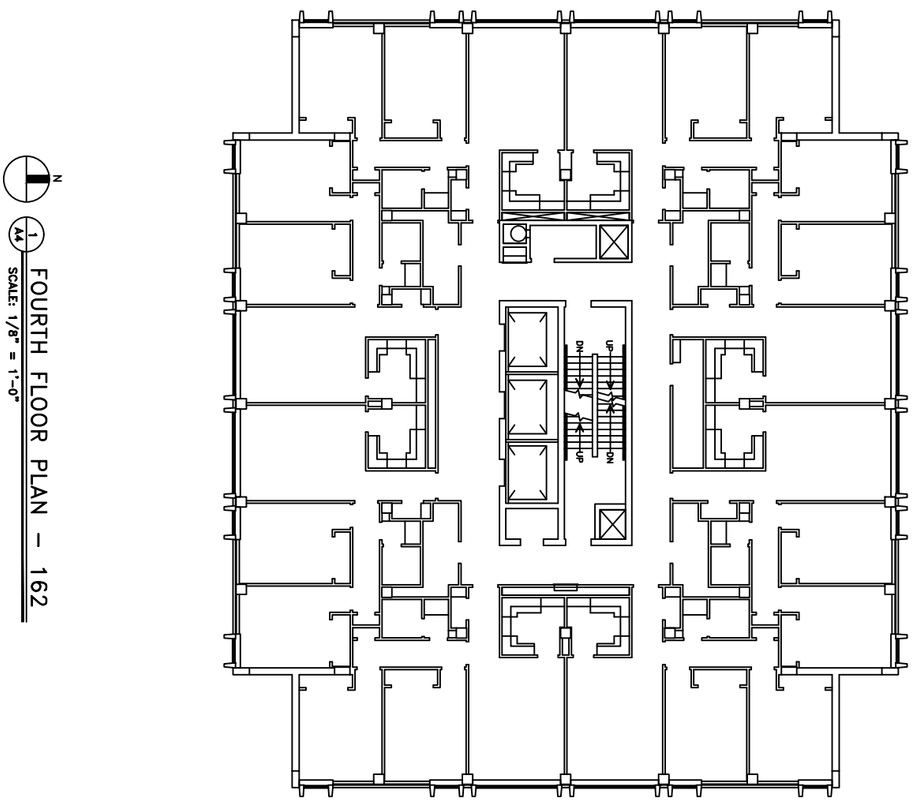
SCALE: 1/8" = 1'-0"

THIRD FLOOR PLAN – 162



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SCALE: 1/8" = 1'-0"

FOURTH FLOOR PLAN – 162

FIGURE NUMBER: #11

F&ME CONSULTANTS PROJECT NUMBER: E5550.05

SAMPLE LOCATION PLAN

University of South Carolina

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1405 WHALEY STREET
Columbia, South Carolina
USC Project Number: H27-Z247

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COLUMBIA, SOUTH CAROLINA

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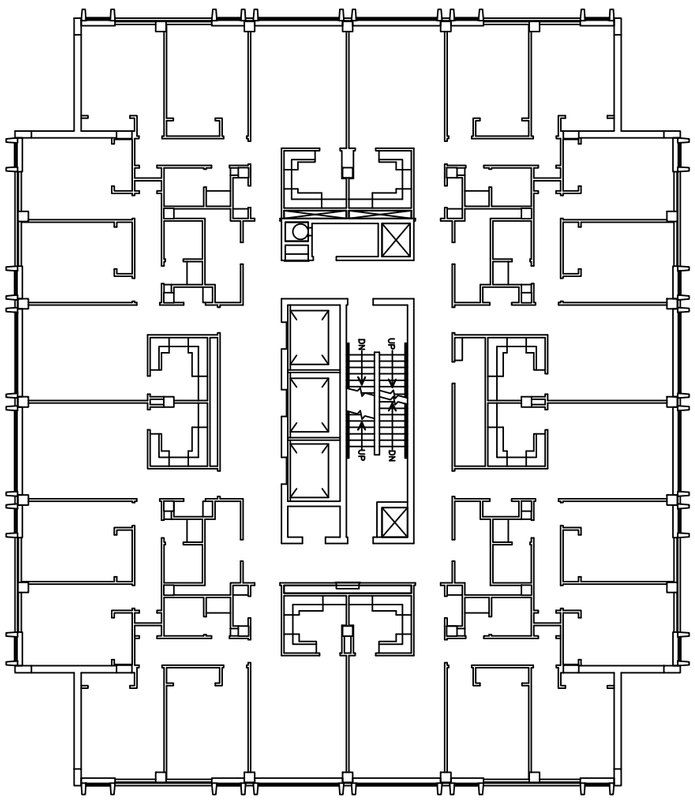
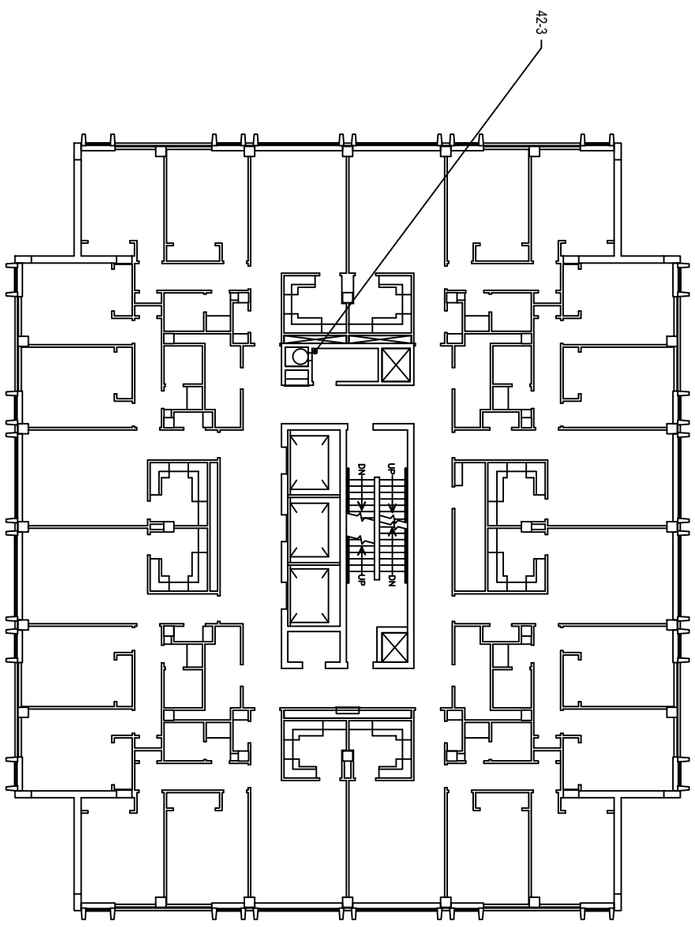
SCALE: 1" = 20'

DRWN. BY: GME
CHKD. BY: JTT
APPR. BY: GME

NOTES:



1 A5 FIFTH FLOOR PLAN – 162
SCALE: 1/8" = 1'-0"



1 A6 SIXTH FLOOR PLAN – 162
SCALE: 1/8" = 1'-0"

FIGURE NUMBER: #12

F&ME CONSULTANTS PROJECT NUMBER: E5550.05

SAMPLE LOCATION PLAN

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APPR. BY: GME
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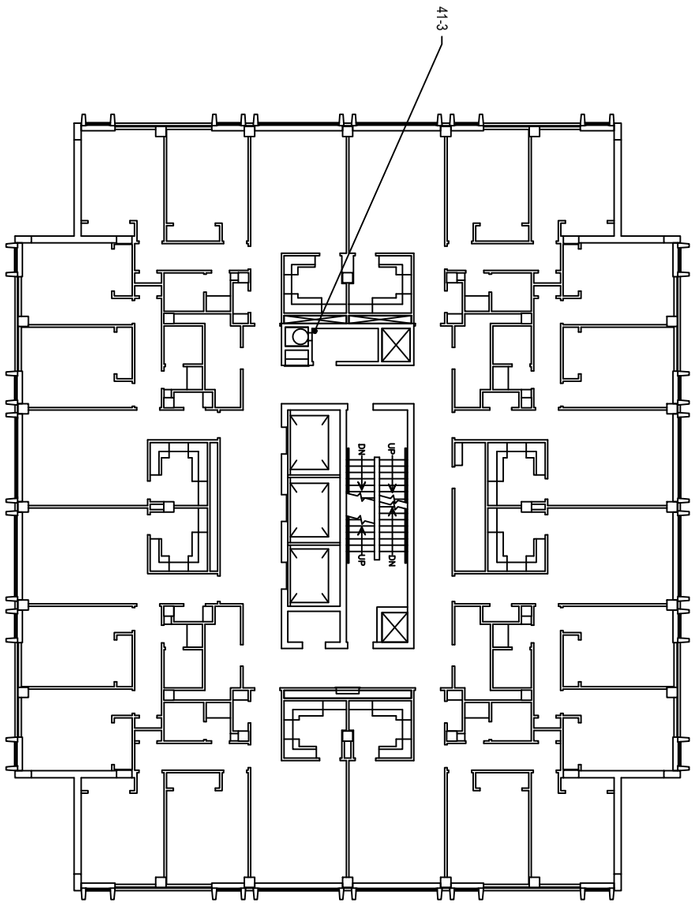
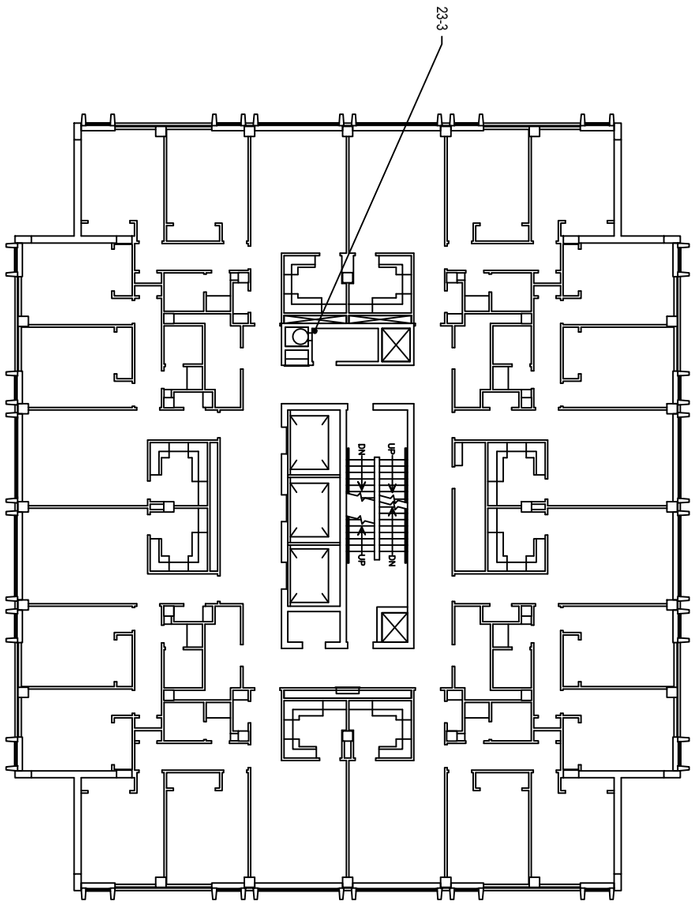


N

1 / A7

SCALE: 1/8" = 1'-0"

SEVENTH FLOOR PLAN – 162



N

1 / A8

SCALE: 1/8" = 1'-0"

EIGHTH FLOOR PLAN – 162

FIGURE NUMBER: #13

F&ME CONSULTANTS PROJECT NUMBER: E5550.05

SAMPLE LOCATION PLAN

University of South Carolina

BATES WEST RESIDENCE HALL
1405 WHALEY STREET
Columbia, South Carolina
USC Project Number: H27-Z247

F&ME CONSULTANTS
GEOTECHNICAL - ENVIRONMENTAL - MATERIALS
COLUMBIA, SOUTH CAROLINA

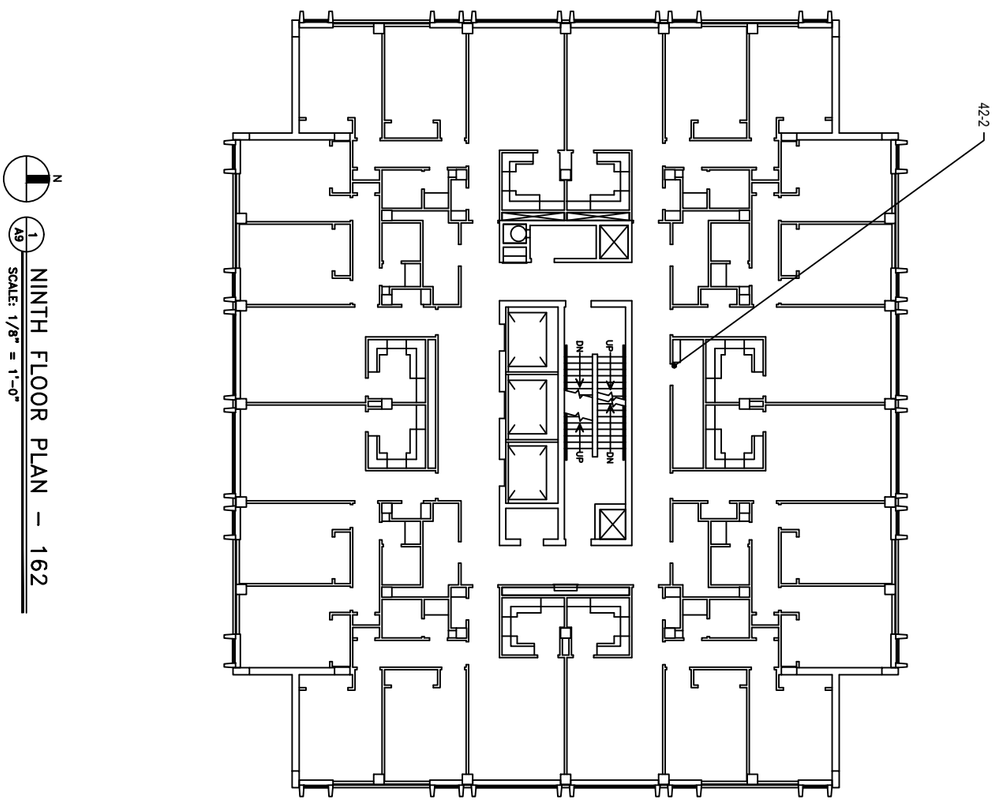
ORIGINAL:

REVISIONS:
1
2
3

SCALE
1" = 20'

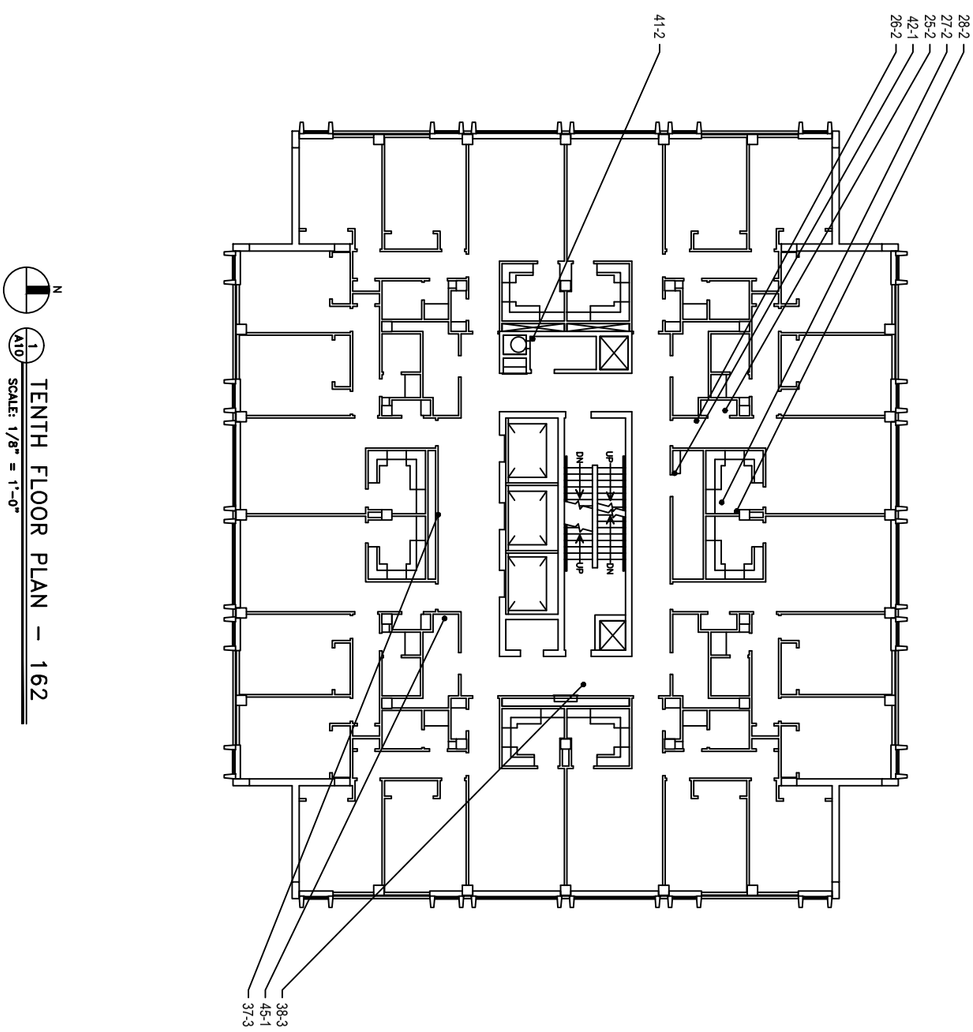
DRWN. BY: GME
CHKD. BY: JTT
APPR. BY: GME

NOTES:



NINTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"



TENTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

FIGURE NUMBER: #14

F&ME CONSULTANTS PROJECT NUMBER: E5550.05

SAMPLE LOCATION PLAN

University of South Carolina

BATES WEST RESIDENCE HALL
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Columbia, South Carolina
USC Project Number: H27-Z247

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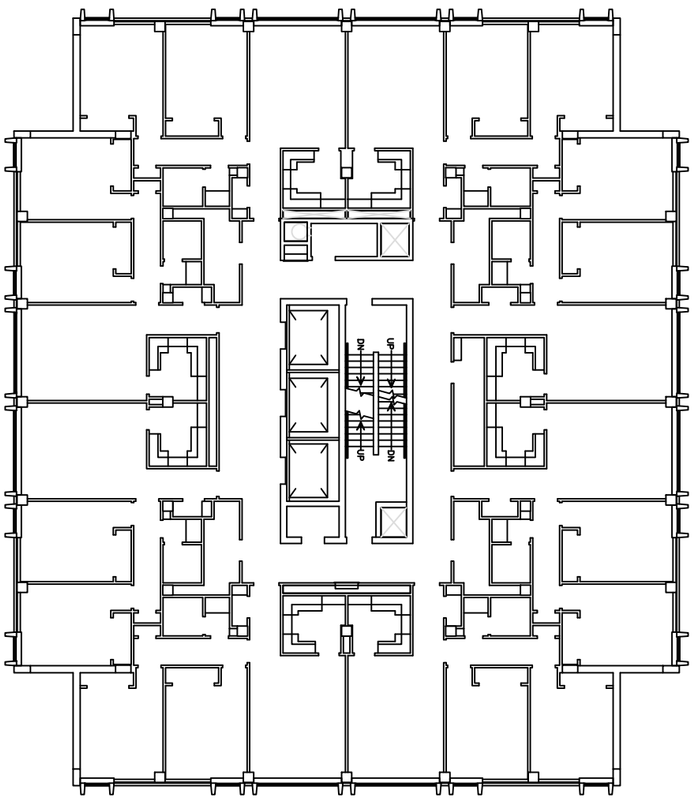
COLUMBIA, SOUTH CAROLINA

ORIGINAL:
REVISIONS:
1
2
3
SCALE
1" = 20'

DRWN. BY: GME
CHKD. BY: JTT
APPR. BY: GME
NOTES:

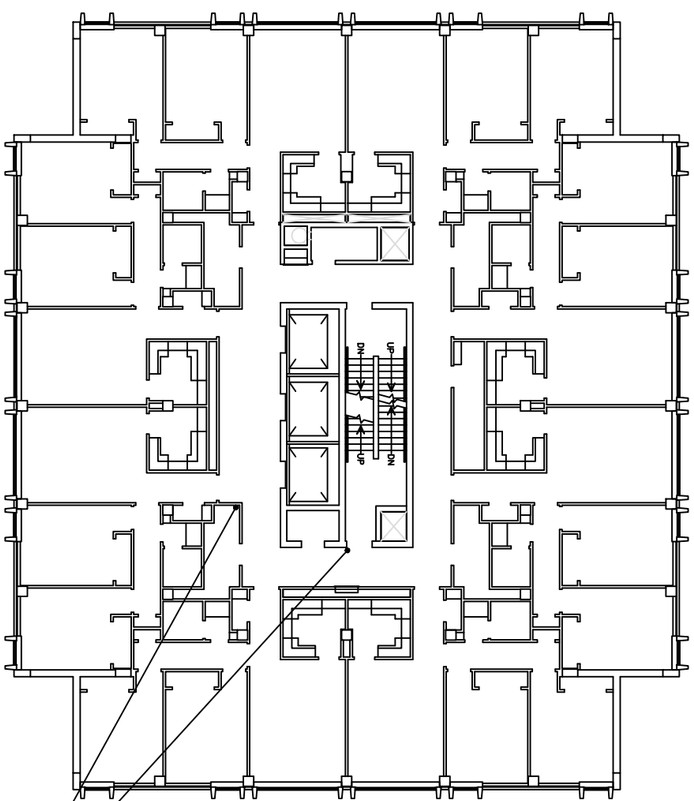


N

A11

SCALE: 1/8" = 1'-0"

ELEVENTH FLOOR PLAN – 162



N

A12

SCALE: 1/8" = 1'-0"

TWELFTH FLOOR PLAN – 162

21-2
45-2

FIGURE NUMBER: #15

F&ME CONSULTANTS PROJECT NUMBER: E5550.05

SAMPLE LOCATION PLAN

University of South Carolina

BATES WEST RESIDENCE HALL
1405 WHALEY STREET
Columbia, South Carolina
USC Project Number: H27-Z247

F&ME CONSULTANTS
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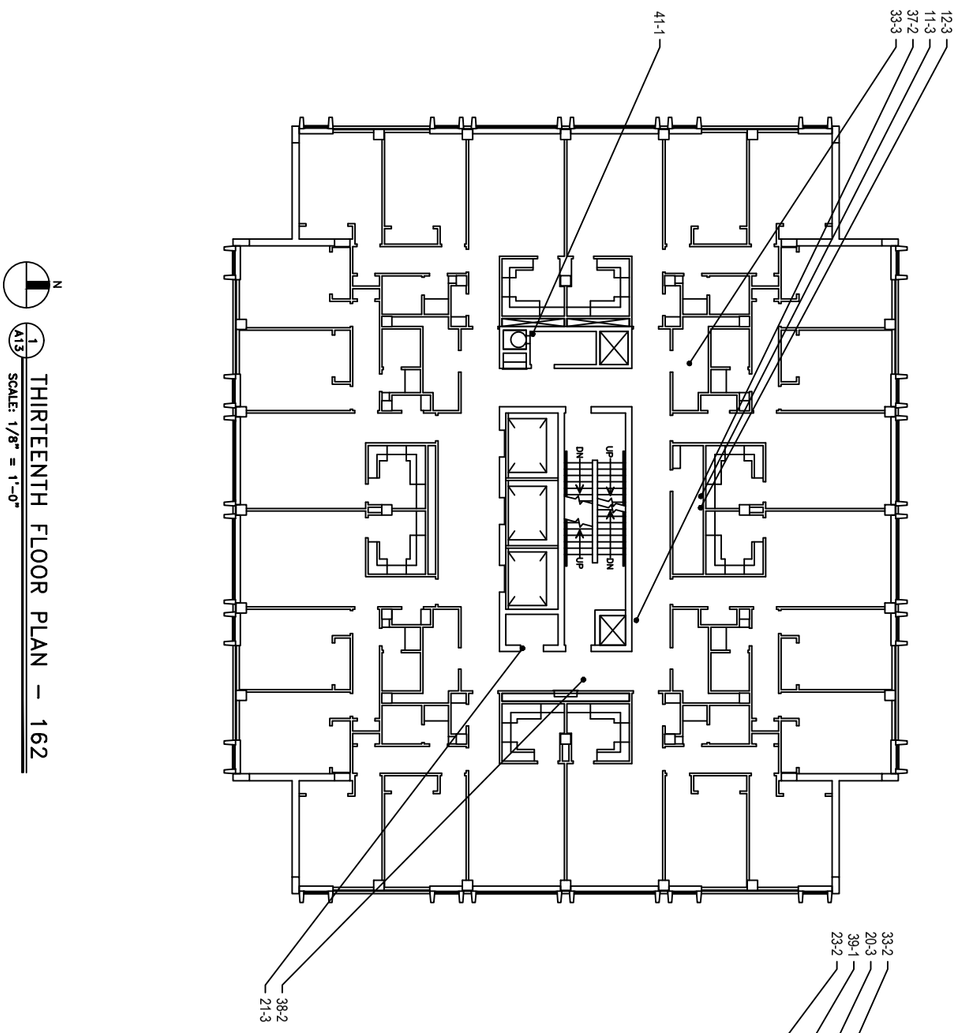
COLUMBIA, SOUTH CAROLINA

ORIGINAL:
REVISIONS:
1
2
3
SCALE: 1" = 20'

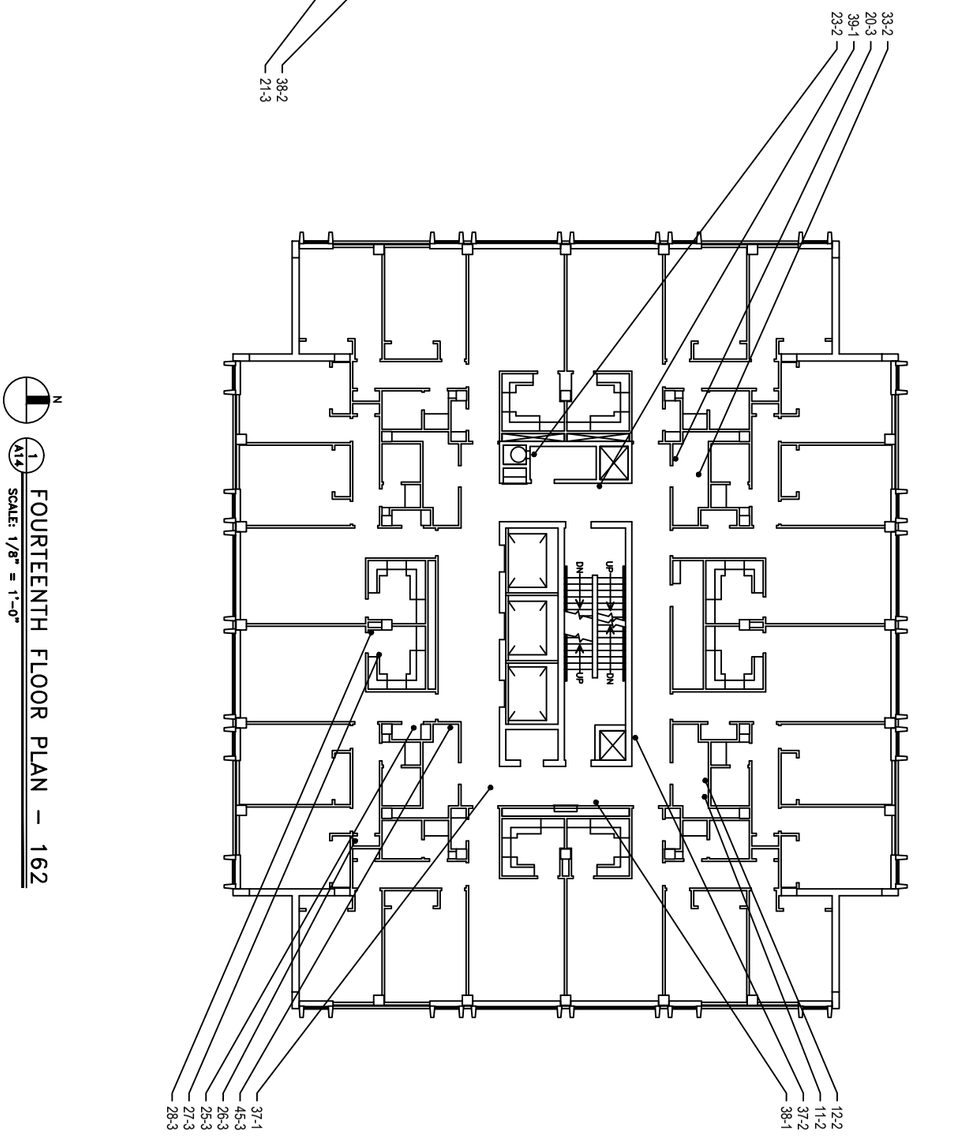
DRWN. BY: GME
CHKD. BY: JTT
APPR. BY: GME
NOTES:



N

A13 — SCALE: 1/8" = 1'-0"

THIRTEENTH FLOOR PLAN – 162



N

A14 — SCALE: 1/8" = 1'-0"

FOURTEENTH FLOOR PLAN – 162

FIGURE NUMBER: #16

F&ME CONSULTANTS PROJECT NUMBER: E5550.05

SAMPLE LOCATION PLAN

University of South Carolina

BATES WEST RESIDENCE HALL
1405 WHALEY STREET
Columbia, South Carolina
USC Project Number: H27-Z247

F&ME CONSULTANTS
GEOTECHNICAL - ENVIRONMENTAL - MATERIALS
COLUMBIA, SOUTH CAROLINA

ORIGINAL:
REVISIONS:
1
2
3
SCALE: 1" = 20'

DRWN. BY: GME
CHKD. BY: JTT
APPR. BY: GME
NOTES:

HA-1 - Spray Applied Textured Ceiling Material on Drywall Ceilings

HA-2 - Drywall Walls with ACM Joint Compound

HA-3 - Tan Streaked 12"x12" Floor Tile and Associated Mastic

HA-4 - ACM Black Mastic Associated with Foam Glass Pipe Insulation

HA-5 - ACM Block Pipe Insulation

HA-6 - ACM Black Mastic Associated w/ Fiberglass Pipe Insulation

HA-7 - ACM Interior Door Caulking (Stairwell Doors)

HA-8 - Tan w/ Orange Streaks 12"x12" Floor Tile and Associated Mastic

HA-9 - Tan w/ Brown Streaks 12"x12" Floor Tile and Associated Mastic

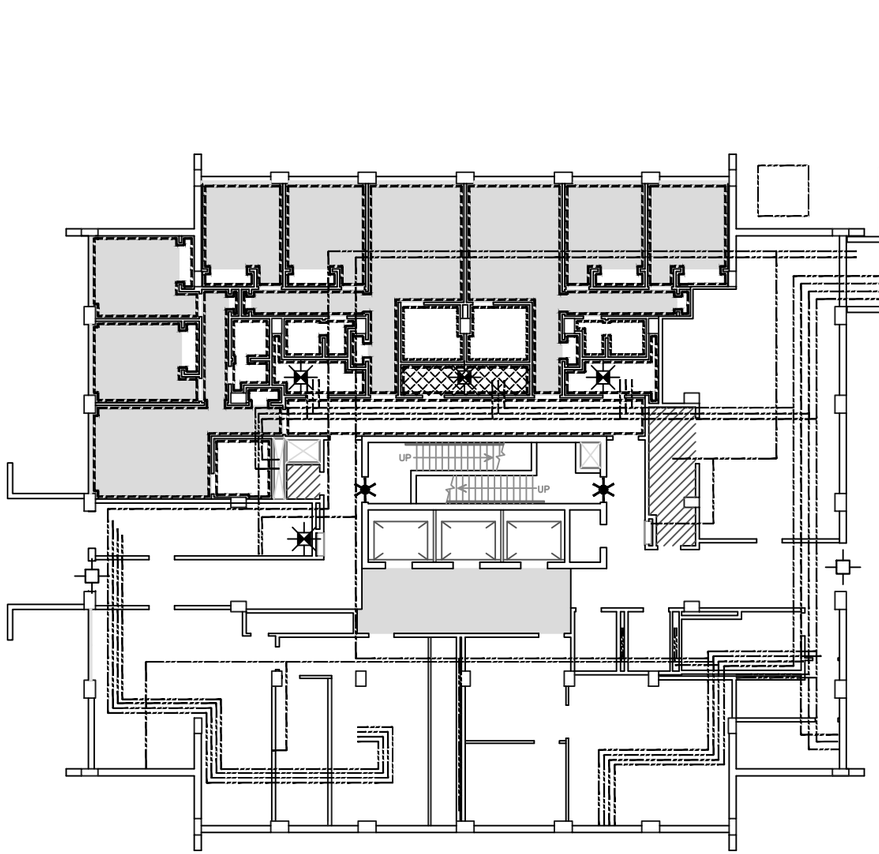
HA-10 - Light Tan 12"x12" Floor Tile and Associated Mastic

HA-11 - Black Mastic on Cementitious Elbows

HA-12 - ACM Black Mastic on Seams of Foam Glass Pipe Insulation

HA-13 - ACM Interior Door Caulking (Exit Doors)

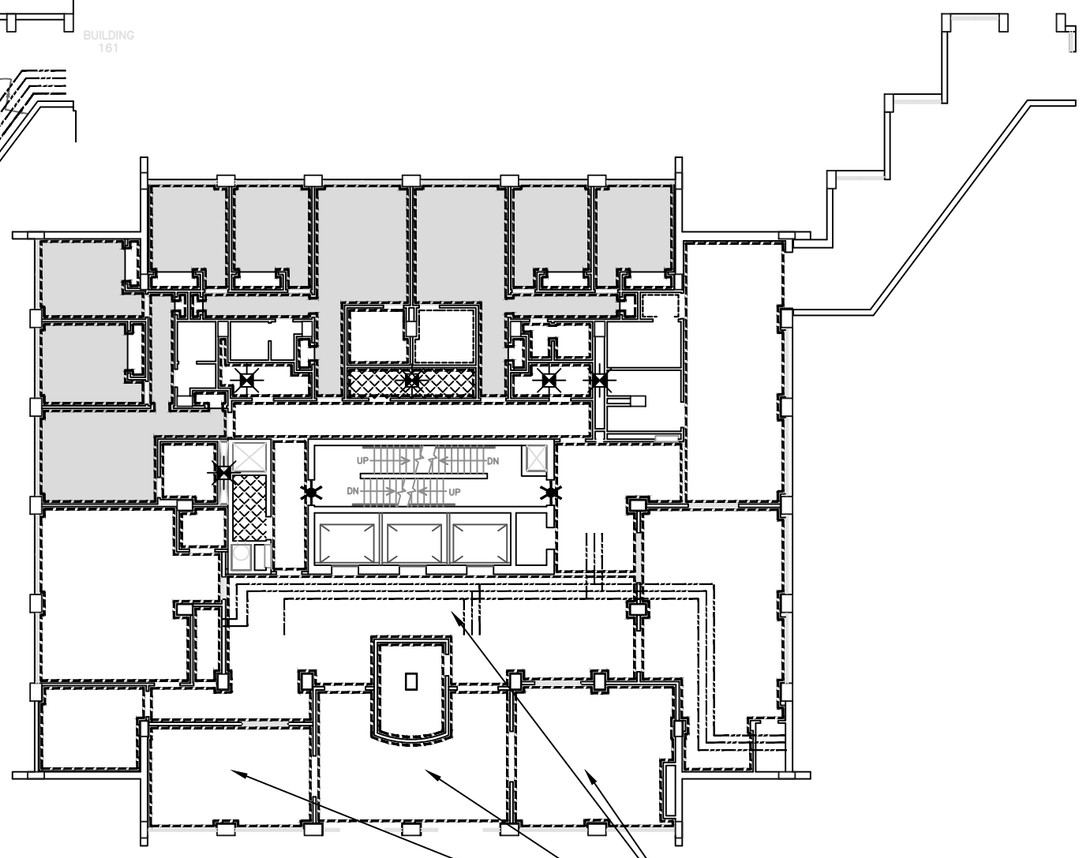
HA-14, HA-15, HA-16, HA-17, HA-18 and HA-19 - All Roofing Materials Assumed Positive (Not shown on Homogeneous Area Plans)



N

1/A1 FIRST FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"



HA-1 - Overspray from Spray Applied Textured Ceilings Noted Above Suspended Ceilings in This Area. Additional Overspray Should be Anticipated Throughout Building above all Areas with Textured Ceilings.

N

1/A2 SECOND FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

NOTE: Mechanical systems piping shown on floor plans are general and schematic and do not depict the actual locations and/ or the configuration of piping. Not all lines are shown on drawings. Multiple ACM materials: black mastic on foam glass insulated lines, black mastic on seams of foam glass insulated lines, black mastic on fittings and joints of fiberglass insulated lines, block pipe insulation all were found throughout the building. These materials were found in mechanical rooms, above suspended ceilings and wall and floor penetrations leading above hard ceilings. The abatement design for abatement and demolition of this structure should take into account these hidden materials. Additional investigation including selective demolition to further investigation should be completed, or contingencies implemented to address them during the abatement operations.

DRWN. BY: GME
CHKD. BY: JTT
APPR. BY: GME
NOTES:

ORIGINAL:
REVISIONS: 1 2 3

SCALE 1" = 20'

F&ME CONSULTANTS
GEOTECHNICAL - ENVIRONMENTAL - MATERIALS
COLUMBIA, SOUTH CAROLINA

HOMOGENEOUS AREA PLAN

University of South Carolina

BATES WEST RESIDENCE HALL
1405 WHALEY STREET
Columbia, South Carolina
USC Project Number: H27-2247

F&ME CONSULTANTS PROJECT NUMBER: E5550.05

FIGURE NUMBER: #17

HA-1 - Spray Applied Textured Ceiling Material on Drywall Ceilings

HA-2 - Drywall Walls with ACM Joint Compound

HA-3 - Tan Streaked 12"x12" Floor Tile and Associated Mastic

HA-4 - ACM Black Mastic Associated with Foam Glass Pipe Insulation

HA-5 - ACM Block Pipe Insulation

HA-6 - ACM Black Mastic Associated w/ Fiberglass Pipe Insulation

HA-7 - ACM Interior Door Caulking (Stairwell Doors)

HA-8 - Tan w/ Orange Streaks 12"x12" Floor Tile and Associated Mastic

HA-9 - Tan w/ Brown Streaks 12"x12" Floor Tile and Associated Mastic

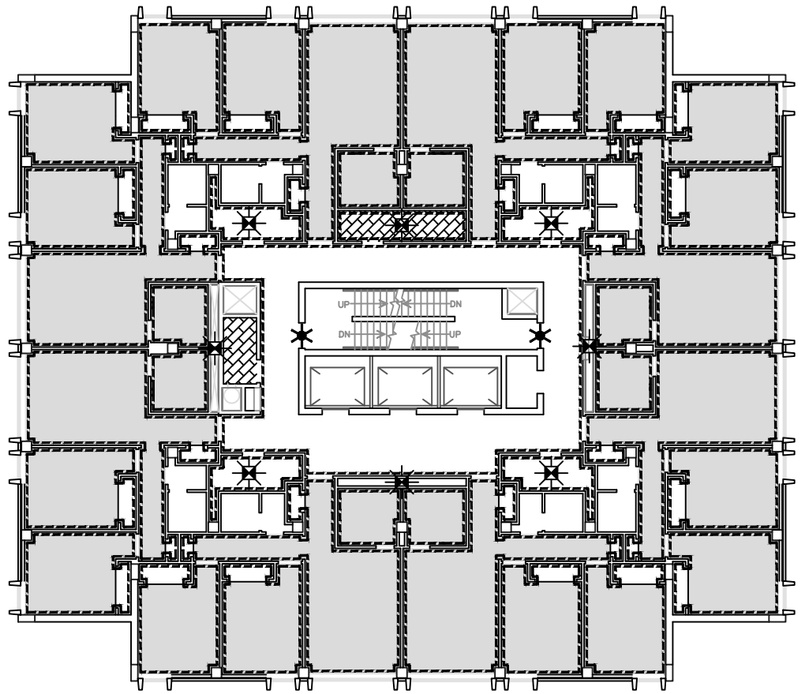
HA-10 - Light Tan 12"x12" Floor Tile and Associated Mastic

HA-11 - Black Mastic on Cementitious Elbows

HA-12 - ACM Black Mastic on Seams of Foam Glass Pipe Insulation

HA-13 - ACM Interior Door Caulking (Exit Doors)

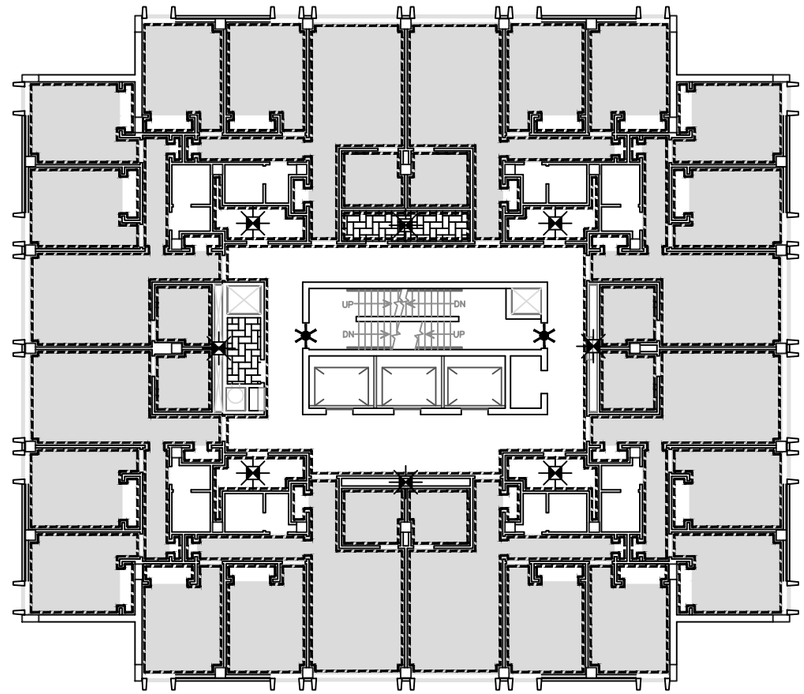
HA-14, HA-15, HA-16, HA-17, HA-18 and HA-19 - All Roofing Materials Assumed Positive (Not shown on Homogeneous Area Plans)



N

1/A3 THIRD FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"



N

1/A4 FOURTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

DRWN. BY: GME
CHKD. BY: JTT
APPR. BY: GME
NOTES:

ORIGINAL:
REVISIONS:
1
2
3

SCALE
1" = 20'

F&ME
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COLUMBIA, SOUTH CAROLINA

HOMOGENEOUS AREA PLAN

University of South Carolina

BATES WEST RESIDENCE HALL
1405 WHALEY STREET
Columbia, South Carolina
USC Project Number: H27-2247

F&ME CONSULTANTS PROJECT NUMBER:
E5550.05

FIGURE NUMBER:
#18

HA-1 - Spray Applied Textured Ceiling Material on Drywall Ceilings

HA-2 - Drywall Walls with ACM Joint Compound

HA-3 - Tan Streaked 12"x12" Floor Tile and Associated Mastic

HA-4 - ACM Black Mastic Associated with Foam Glass Pipe Insulation

HA-5 - ACM Block Pipe Insulation

HA-6 - ACM Black Mastic Associated w/ Fiberglass Pipe Insulation

HA-7 - ACM Interior Door Caulking (Stairwell Doors)

HA-8 - Tan w/ Orange Streaks 12"x12" Floor Tile and Associated Mastic

HA-9 - Tan w/ Brown Streaks 12"x12" Floor Tile and Associated Mastic

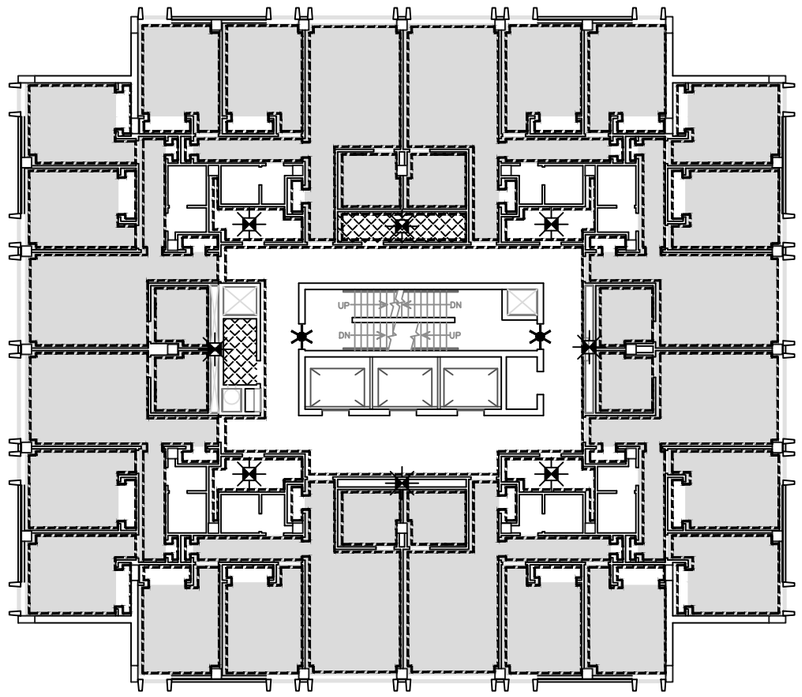
HA-10 - Light Tan 12"x12" Floor Tile and Associated Mastic

HA-11 - Black Mastic on Cementitious Elbows

HA-12 - ACM Black Mastic on Seams of Foam Glass Pipe Insulation

HA-13 - ACM Interior Door Caulking (Exit Doors)

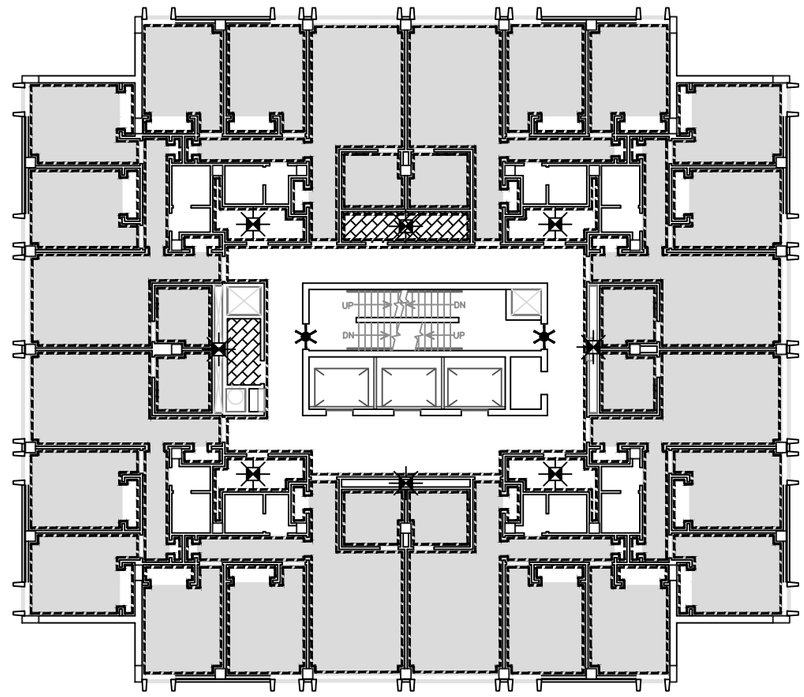
HA-14, HA-15, HA-16, HA-17, HA-18 and HA-19 - All Roofing Materials Assumed Positive (Not shown on Homogeneous Area Plans)



N

1/A5 FIFTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"



N

1/A6 SIXTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

DRWN. BY: GME
CHKD. BY: JTT
APPR. BY: GME
NOTES:

ORIGINAL:
REVISIONS:
1
2
3

SCALE
1" = 20'

F&ME CONSULTANTS
GEOTECHNICAL - ENVIRONMENTAL - MATERIALS
COLUMBIA, SOUTH CAROLINA

HOMOGENEOUS AREA PLAN

University of South Carolina

BATES WEST RESIDENCE HALL
1405 WHALEY STREET
Columbia, South Carolina
USC Project Number: H27-Z247

F&ME CONSULTANTS PROJECT NUMBER:
E5550.05

FIGURE NUMBER:
#19

HA-1 - Spray Applied Textured Ceiling Material on Drywall Ceilings

HA-2 - Drywall Walls with ACM Joint Compound

HA-3 - Tan Streaked 12"x12" Floor Tile and Associated Mastic

HA-4 - ACM Black Mastic Associated with Foam Glass Pipe Insulation

HA-5 - ACM Block Pipe Insulation

HA-6 - ACM Black Mastic Associated w/ Fiberglass Pipe Insulation

HA-7 - ACM Interior Door Caulking (Stairwell Doors)

HA-8 - Tan w/ Orange Streaks 12"x12" Floor Tile and Associated Mastic

HA-9 - Tan w/ Brown Streaks 12"x12" Floor Tile and Associated Mastic

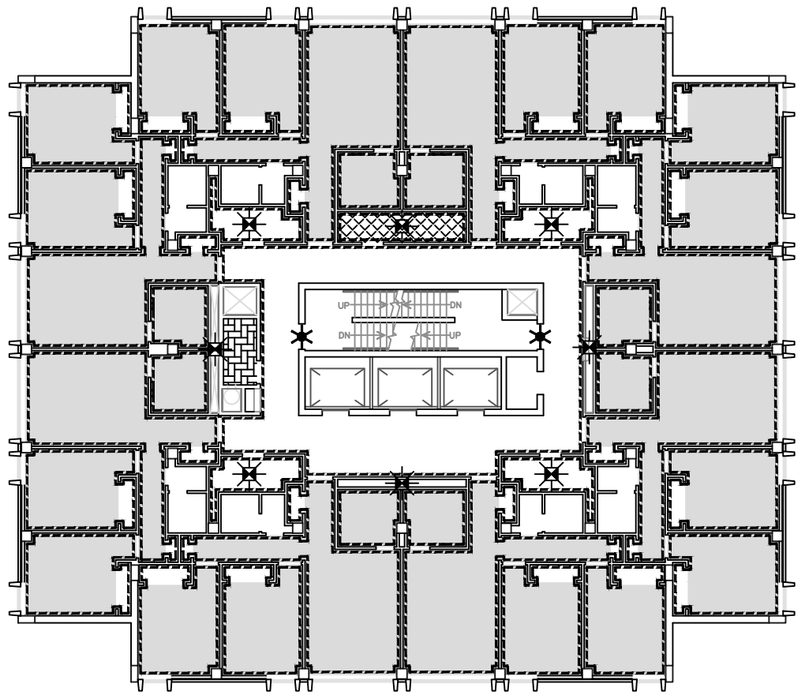
HA-10 - Light Tan 12"x12" Floor Tile and Associated Mastic

HA-11 - Black Mastic on Cementitious Elbows

HA-12 - ACM Black Mastic on Seams of Foam Glass Pipe Insulation

HA-13 - ACM Interior Door Caulking (Exit Doors)

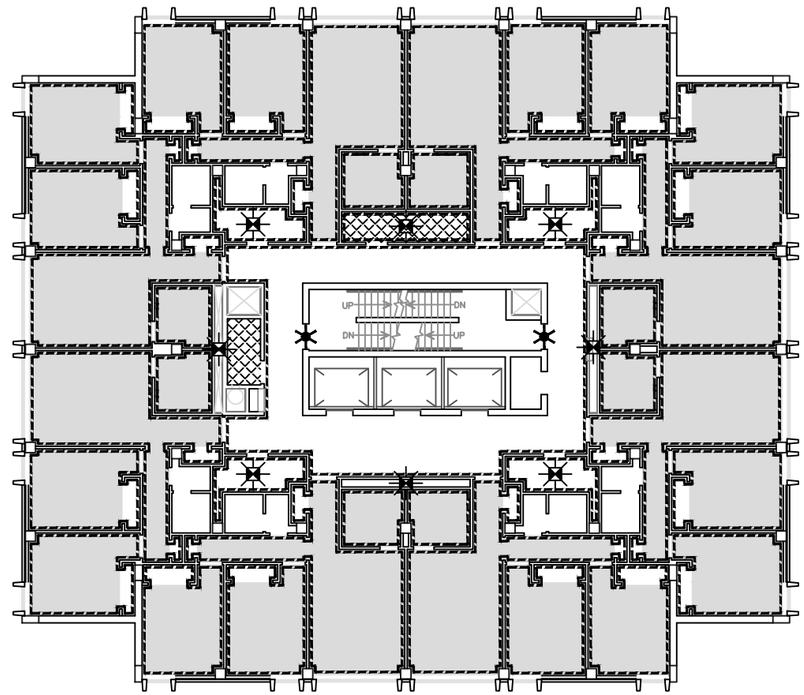
HA-14, HA-15, HA-16, HA-17, HA-18 and HA-19 - All Roofing Materials Assumed Positive (Not shown on Homogeneous Area Plans)



N

1/A7 SEVENTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"



N

1/A8 EIGHTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

DRWN. BY: GME
CHKD. BY: JTT
APPR. BY: GME
NOTES:

ORIGINAL:
REVISIONS: 1 2 3
SCALE 1" = 20'

F&ME CONSULTANTS
GEOTECHNICAL - ENVIRONMENTAL - MATERIALS
COLUMBIA, SOUTH CAROLINA

HOMOGENEOUS AREA PLAN

University of South Carolina

BATES WEST RESIDENCE HALL
1405 WHALEY STREET
Columbia, South Carolina
USC Project Number: H27-2247

F&ME CONSULTANTS PROJECT NUMBER: E5550.05

FIGURE NUMBER: #20

HA-1 - Spray Applied Textured Ceiling Material on Drywall Ceilings

HA-2 - Drywall Walls with ACM Joint Compound

HA-3 - Tan Streaked 12"x12" Floor Tile and Associated Mastic

HA-4 - ACM Black Mastic Associated with Foam Glass Pipe Insulation

HA-5 - ACM Block Pipe Insulation

HA-6 - ACM Black Mastic Associated w/ Fiberglass Pipe Insulation

HA-7 - ACM Interior Door Caulking (Stairwell Doors)

HA-8 - Tan w/ Orange Streaks 12"x12" Floor Tile and Associated Mastic

HA-9 - Tan w/ Brown Streaks 12"x12" Floor Tile and Associated Mastic

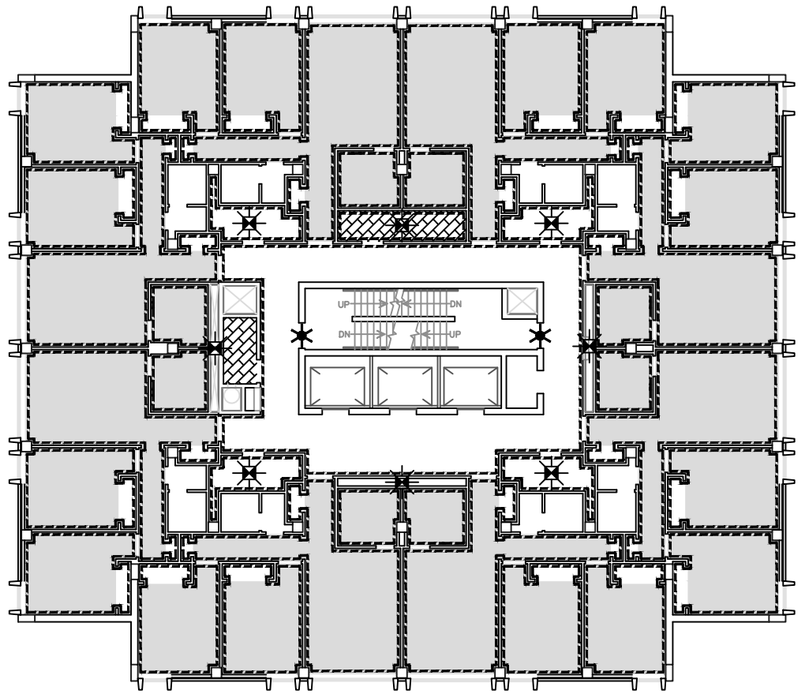
HA-10 - Light Tan 12"x12" Floor Tile and Associated Mastic

HA-11 - Black Mastic on Cementitious Elbows

HA-12 - ACM Black Mastic on Seams of Foam Glass Pipe Insulation

HA-13 - ACM Interior Door Caulking (Exit Doors)

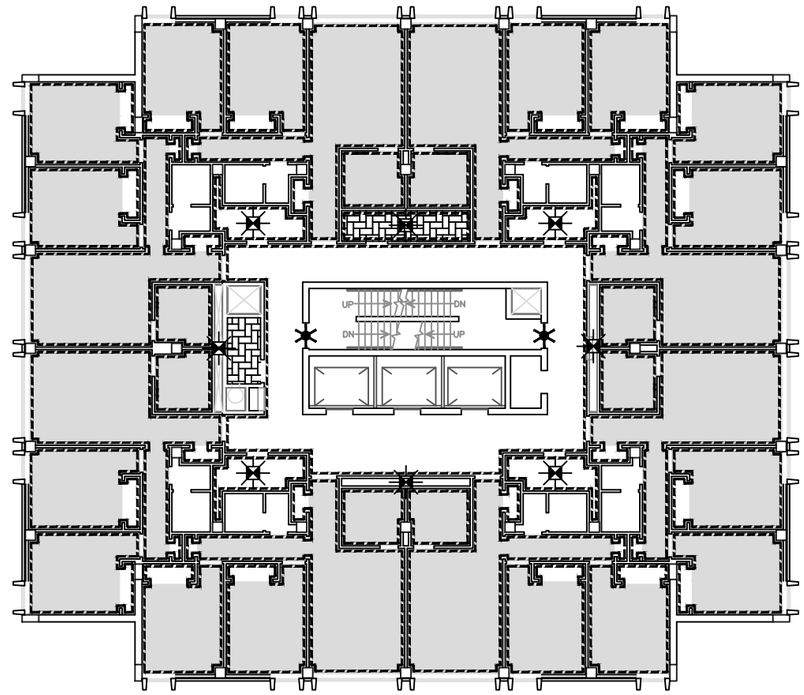
HA-14, HA-15, HA-16, HA-17, HA-18 and HA-19 - All Roofing Materials Assumed Positive (Not shown on Homogeneous Area Plans)



N

1/A9 NINTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"



N

1/A10 TENTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

DRWN. BY: GME
CHKD. BY: JTT
APPR. BY: GME
NOTES:

ORIGINAL:
REVISIONS:
1
2
3

SCALE
1" = 20'

F&ME
CONSULTANTS
GEOTECHNICAL - ENVIRONMENTAL - MATERIALS
COLUMBIA, SOUTH CAROLINA

HOMOGENEOUS AREA PLAN

University of South Carolina

BATES WEST RESIDENCE HALL
1405 WHALEY STREET
Columbia, South Carolina
USC Project Number: H27-2247

F&ME CONSULTANTS PROJECT NUMBER:
E5550.05

FIGURE NUMBER:
#21

HA-1 - Spray Applied Textured Ceiling Material on Drywall Ceilings

HA-2 - Drywall Walls with ACM Joint Compound

HA-3 - Tan Streaked 12"x12" Floor Tile and Associated Mastic

HA-4 - ACM Black Mastic Associated with Foam Glass Pipe Insulation

HA-5 - ACM Block Pipe Insulation

HA-6 - ACM Black Mastic Associated w/ Fiberglass Pipe Insulation

HA-7 - ACM Interior Door Caulking (Stairwell Doors)

HA-8 - Tan w/ Orange Streaks 12"x12" Floor Tile and Associated Mastic

HA-9 - Tan w/ Brown Streaks 12"x12" Floor Tile and Associated Mastic

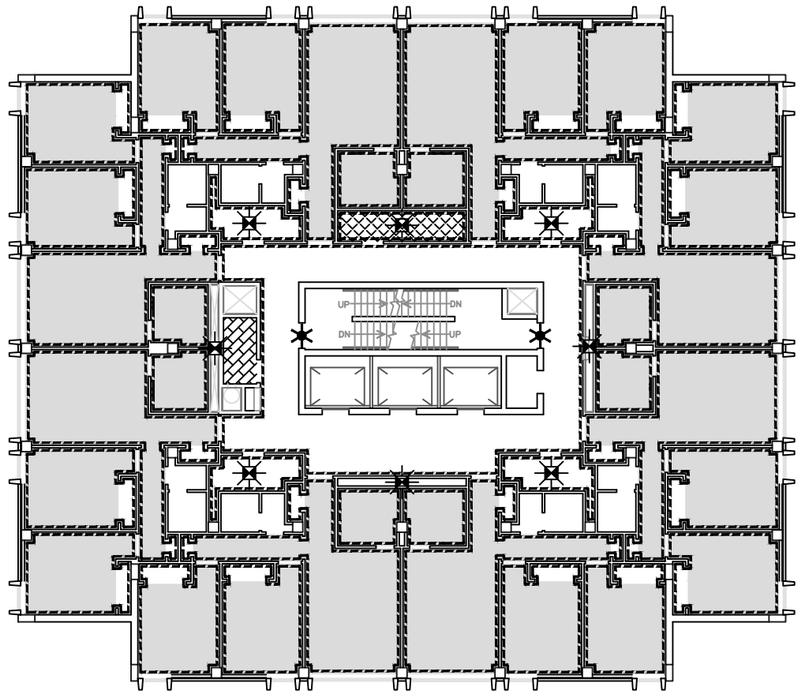
HA-10 - Light Tan 12"x12" Floor Tile and Associated Mastic

HA-11 - Black Mastic on Cementitious Elbows

HA-12 - ACM Black Mastic on Seams of Foam Glass Pipe Insulation

HA-13 - ACM Interior Door Caulking (Exit Doors)

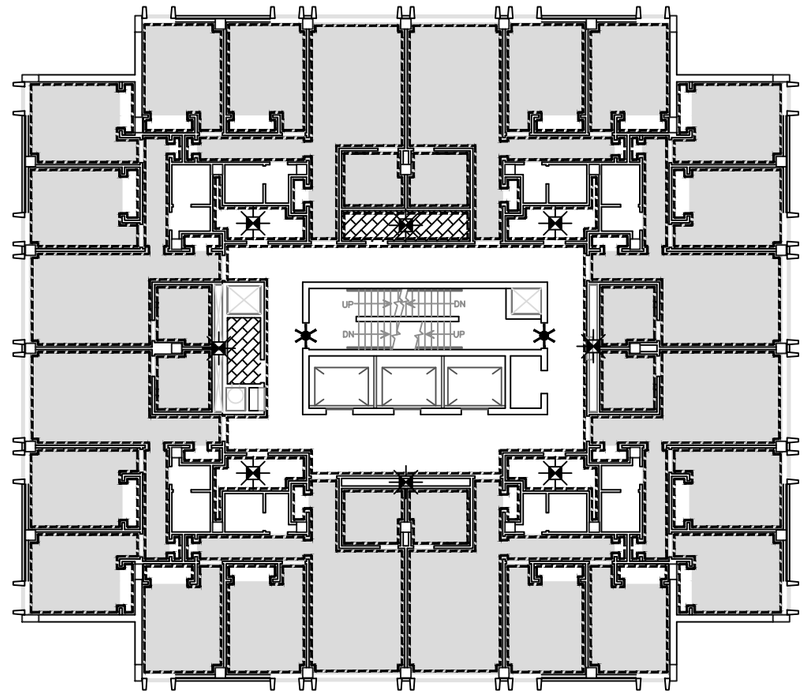
HA-14, HA-15, HA-16, HA-17, HA-18 and HA-19 - All Roofing Materials Assumed Positive (Not shown on Homogeneous Area Plans)



N

1/A11 ELEVENTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"



N

1/A12 TWELFTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

DRWN. BY: GME
CHKD. BY: JTT
APPR. BY: GME
NOTES:

ORIGINAL:
REVISIONS:
1
2
3

SCALE
1" = 20'

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COLUMBIA, SOUTH CAROLINA

HOMOGENEOUS AREA PLAN

University of South Carolina

BATES WEST RESIDENCE HALL
1405 WHALEY STREET
Columbia, South Carolina
USC Project Number: H27-2247

F&ME CONSULTANTS PROJECT NUMBER:
E5550.05

FIGURE NUMBER:
#22

HA-1 - Spray Applied Textured Ceiling Material on Drywall Ceilings

HA-2 - Drywall Walls with ACM Joint Compound

HA-3 - Tan Streaked 12"x12" Floor Tile and Associated Mastic

HA-4 - ACM Black Mastic Associated with Foam Glass Pipe Insulation

HA-5 - ACM Block Pipe Insulation

HA-6 - ACM Black Mastic Associated w/ Fiberglass Pipe Insulation

HA-7 - ACM Interior Door Caulking (Stairwell Doors)

HA-8 - Tan w/ Orange Streaks 12"x12" Floor Tile and Associated Mastic

HA-9 - Tan w/ Brown Streaks 12"x12" Floor Tile and Associated Mastic

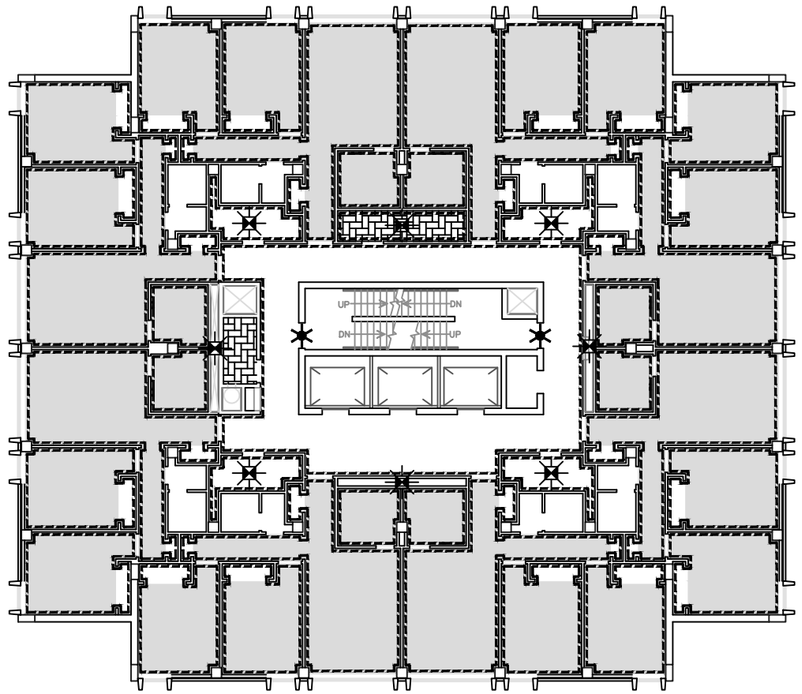
HA-10 - Light Tan 12"x12" Floor Tile and Associated Mastic

HA-11 - Black Mastic on Cementitious Elbows

HA-12 - ACM Black Mastic on Seams of Foam Glass Pipe Insulation

HA-13 - ACM Interior Door Caulking (Exit Doors)

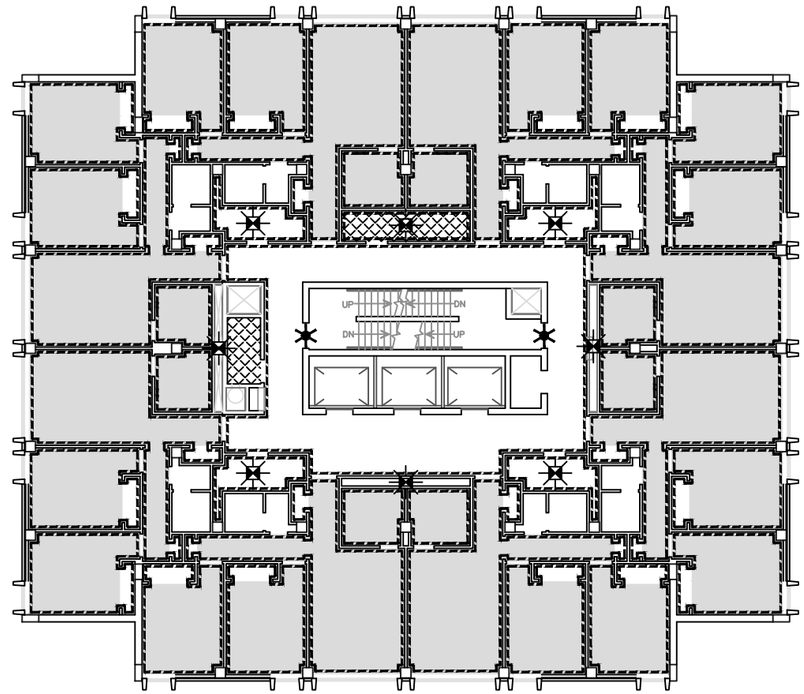
HA-14, HA-15, HA-16, HA-17, HA-18 and HA-19 - All Roofing Materials Assumed Positive (Not shown on Homogeneous Area Plans)



N

1/A13 THIRTEENTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"



N

1/A14 FOURTEENTH FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

DRWN. BY: GME
CHKD. BY: JTT
APPR. BY: GME
NOTES:

ORIGINAL:
REVISIONS:
1
2
3

SCALE
1" = 20'

F&ME
CONSULTANTS
GEOTECHNICAL - ENVIRONMENTAL - MATERIALS
COLUMBIA, SOUTH CAROLINA

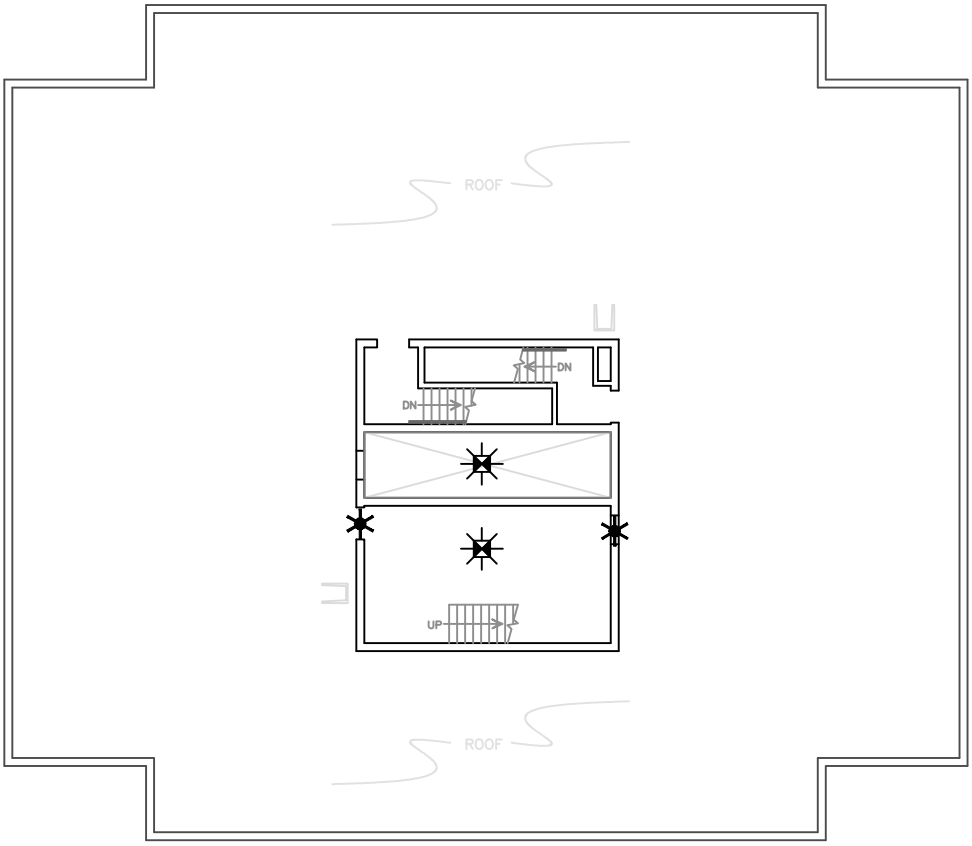
HOMOGENEOUS AREA PLAN

University of South Carolina

BATES WEST RESIDENCE HALL
1405 WHALEY STREET
Columbia, South Carolina
USC Project Number: H27-2247

F&ME CONSULTANTS PROJECT NUMBER:
E5550.05

FIGURE NUMBER:
#23



N

1
A15

PENTHOUSE FLOOR PLAN – 162

SCALE: 1/8" = 1'-0"

F&ME CONSULTANTS

HOMOGENEOUS AREA PLAN
BATES WEST RESIDENCE HALL
COLUMBIA, SOUTH CAROLINA

UNIVERSITY OF SOUTH CAROLINA

DRAWN BY:	GME	SCALE:	1"=20'
CHECKED BY:	JTT	PROJECT:	E5550.05
APPROVED BY:	GME	FIGURE:	24

APPENDIX B

Summary of Samples (Table I)

Summary of Asbestos Containing Materials (Table II)

Summary of Inspection

Physical Assessment Data Sheets

Bulk Asbestos Analytical Reports

Chain of Custody

TABLE I. SUMMARY OF SAMPLES

Sample ID	Sample Description
BW-1-1	Orange Line Elbow associated with Fiberglass Pipe Insulation (Mud Only)
BW-1-2	Orange Line Elbow associated with Fiberglass Pipe Insulation (Mud Only)
BW-1-3	Orange Line Elbow associated with Fiberglass Pipe Insulation (Mud Only)
BW-2-1	Blue Line Elbow associated with Fiberglass Pipe Insulation (Mud Only)
BW-2-2	Blue Line Elbow associated with Fiberglass Pipe Insulation (Mud Only)
BW-2-3	Blue Line Elbow associated with Fiberglass Pipe Insulation (Mud Only)
BW-3-1	Tan Streaked 12”x12” Floor Tile & Mastic
BW-3-2	Tan Streaked 12”x12” Floor Tile & Mastic
BW-3-3	Tan Streaked 12”x12” Floor Tile & Mastic
BW-4-1	Black 12”x12” Floor Tile & Mastic
BW-4-2	Black 12”x12” Floor Tile & Mastic
BW-4-3	Black 12”x12” Floor Tile & Mastic
BW-5-1	Red 12”x12” Floor Tile & Mastic
BW-5-2	Red 12”x12” Floor Tile & Mastic
BW-5-3	Red 12”x12” Floor Tile & Mastic
BW-6-1	2’x4’ Pinhole Punctured Suspended Ceiling Tiles
BW-6-2	2’x4’ Pinhole Punctured Suspended Ceiling Tiles
BW-6-3	2’x4’ Pinhole Punctured Suspended Ceiling Tiles
BW-7-1	Black Cove Base & Gold Mastic
BW-7-2	Black Cove Base & Gold Mastic
BW-7-3	Black Cove Base & Gold Mastic
BW-8-1	Black Cove Base & Brown Mastic
BW-8-2	Black Cove Base & Brown Mastic
BW-8-3	Black Cove Base & Brown Mastic
BW-9-1	White Sink Undercoating

TABLE I. SUMMARY OF SAMPLES

Sample ID	Sample Description
BW-9-2	White Sink Undercoating
BW-9-3	White Sink Undercoating
BW-10-1	White Scar & Pitted 2'x2' Ceiling Tiles
BW-10-2	White Scar & Pitted 2'x2' Ceiling Tiles
BW-10-3	White Scar & Pitted 2'x2' Ceiling Tiles
BW-11-1	Green Firestop
BW-11-2	Green Firestop
BW-11-3	Green Firestop
BW-12-1	Red Firestop
BW-12-2	Red Firestop
BW-12-3	Red Firestop
BW-13-1	Black Expansion Joint Compound
BW-13-2	Black Expansion Joint Compound
BW-13-3	Black Expansion Joint Compound
BW-14-1	Black Mastic associated with Black Foam Glass
BW-14-2	Black Mastic associated with Black Foam Glass
BW-14-3	Black Mastic associated with Black Foam Glass
BW-14-4	Black Mastic associated with Black Foam Glass
BW-15-1	White Block Pipe Insulation
BW-15-2	White Block Pipe Insulation
BW-15-3	White Block Pipe Insulation
BW-17-1	Elbow associated with White Block Pipe Insulation
BW-17-2	Elbow associated with White Block Pipe Insulation
BW-17-3	Elbow associated with White Block Pipe Insulation
BW-18-1	Black Mastic on Fiberglass Elbow
BW-18-2	Black Mastic on Fiberglass Elbow

TABLE I. SUMMARY OF SAMPLES

Sample ID	Sample Description
BW-18-3	Black Mastic on Fiberglass Elbow
BW-19-1	White Heater Exhaust Duct Mastic
BW-19-2	White Heater Exhaust Duct Mastic
BW-19-3	White Heater Exhaust Duct Mastic
BW-20-1	Pink Firestop Caulk
BW-20-2	Pink Firestop Caulk
BW-20-3	Pink Firestop Caulk
BW-21-1	Door Caulking
BW-21-2	Door Caulking
BW-21-3	Door Caulking
BW-22-1	White Duct Mastic
BW-22-2	White Duct Mastic
BW-22-3	White Duct Mastic
BW-23-1	Tan w/Orange Streaks 12”x12” Floor Tile & Mastic
BW-23-2	Tan w/Orange Streaks 12”x12” Floor Tile & Mastic
BW-23-3	Tan w/Orange Streaks 12”x12” Floor Tile & Mastic
BW-24-1	Maroon Line Pipe Elbow associated w/Fiberglass Insulation
BW-24-2	Maroon Line Pipe Elbow associated w/Fiberglass Insulation
BW-24-3	Maroon Line Pipe Elbow associated w/Fiberglass Insulation
BW-25-1	Yellow Carpet Mastic associated w/Apartment Room
BW-25-2	Yellow Carpet Mastic associated w/Apartment Room
BW-25-3	Yellow Carpet Mastic associated w/Apartment Room
BW-26-1	Tan Cove Base & Mastic
BW-26-2	Tan Cove Base & Mastic
BW-26-3	Tan Cove Base & Mastic

TABLE I. SUMMARY OF SAMPLES

Sample ID	Sample Description
BW-27-1	Grey Cove Base & Mastic
BW-27-2	Grey Cove Base & Mastic
BW-27-3	Grey Cove Base & Mastic
BW-28-1	New Tan Streaked 12”x12”Floor Tile & Yellow Mastic
BW-28-2	New Tan Streaked 12”x12”Floor Tile & Yellow Mastic
BW-28-3	New Tan Streaked 12”x12”Floor Tile & Yellow Mastic
BW-29-1	White Streaked 12”x12” Floor Tile & Yellow Mastic
BW-29-2	White Streaked 12”x12” Floor Tile & Yellow Mastic
BW-29-3	White Streaked 12”x12” Floor Tile & Yellow Mastic
BW-30-1	Exterior Gray Door Caulking
BW-30-2	Exterior Gray Door Caulking
BW-30-3	Exterior Gray Door Caulking
BW-31-1	2’x 2’ Smooth Ceiling Tiles
BW-31-2	2’x 2’ Smooth Ceiling Tiles
BW-31-3	2’x 2’ Smooth Ceiling Tiles
BW-32-1	White Overspray Material
BW-32-2	White Overspray Material
BW-32-3	White Overspray Material
BW-33-1	White Mastic on end of Fiberglass Pipe Insulation
BW-33-2	White Mastic on end of Fiberglass Pipe Insulation
BW-33-3	White Mastic on end of Fiberglass Pipe Insulation
BW-34-1	Gold Carpet Mastic
BW-34-2	Gold Carpet Mastic
BW-34-3	Gold Carpet Mastic
BW-35-1	Black Vapor Barrier Felt

TABLE I. SUMMARY OF SAMPLES

Sample ID	Sample Description
BW-35-2	Black Vapor Barrier Felt
BW-35-3	Black Vapor Barrier Felt
BW-36-1	Gold Ceramic Tile Mastic
BW-36-2	Gold Ceramic Tile Mastic
BW-36-3	Gold Ceramic Tile Mastic
BW-37-1	Black Mastic on Fiberglass Pipe Insulation
BW-37-2	Black Mastic on Fiberglass Pipe Insulation
BW-37-3	Black Mastic on Fiberglass Pipe Insulation
BW-38-1	Grey Mastic on Metal Ductwork
BW-38-2	Grey Mastic on Metal Ductwork
BW-38-3	Grey Mastic on Metal Ductwork
BW-39-1	Black Cove Base & Mastic
BW-39-2	Black Cove Base & Mastic
BW-39-3	Black Cove Base & Mastic
BW-40-1	Canvas Wrap on Blue Line
BW-40-2	Canvas Wrap on Blue Line
BW-40-3	Canvas Wrap on Blue Line
BW-41-1	Tan with brown streaks 12” x 12” floor tile and mastic
BW-41-2	Tan with brown streaks 12” x 12” floor tile and mastic
BW-41-3	Tan with brown streaks 12” x 12” floor tile and mastic
BW-42-1	Light tan 12” x 12” floor tile and mastic
BW-42-2	Light tan 12” x 12” floor tile and mastic
BW-42-3	Light tan 12” x 12” floor tile and mastic
BW-43-1	Black mastic on cementitious elbows
BW-43-2	Black mastic on cementitious elbows

TABLE I. SUMMARY OF SAMPLES

Sample ID	Sample Description
BW-43-3	Black mastic on cementitious elbows
BW-44-1	Leveling compound
BW-44-2	Leveling compound
BW-44-3	Leveling compound
BW-45-1	Black mastic associated with seems of foam glass TSI
BW-45-2	Black mastic associated with seems of foam glass TSI
BW-45-3	Black mastic associated with seems of foam glass TSI
BW-46-1	White pipe flange mastic
BW-46-2	White pipe flange mastic
BW-46-3	White pipe flange mastic
BW-47-1	Tan skim coat
BW-47-2	Tan skim coat
BW-47-3	Tan skim coat
BW-47-4	Tan skim coat
BW-47-5	Tan skim coat
BW-47-6	Tan skim coat
BW-47-7	Tan skim coat
BW-48-1	Black window glazing
BW-48-2	Black window glazing
BW-48-3	Black window glazing
BW-49-1	Grey exterior stucco
BW-49-2	Grey exterior stucco
BW-49-3	Grey exterior stucco
BW-49-4	Grey exterior stucco
BW-49-5	Grey exterior stucco

TABLE I. SUMMARY OF SAMPLES

Sample ID	Sample Description
BW-49-6	Grey exterior stucco
BW-49-7	Grey exterior stucco
BW-50-1	White exterior door caulking
BW-50-2	White exterior door caulking
BW-50-3	White exterior door caulking
BW-51-1	Black door window glazing
BW-51-2	Black door window glazing
BW-51-3	Black door window glazing
BW-52-1	White exterior window caulking
BW-52-2	White exterior window caulking
BW-52-3	White exterior window caulking
BW-53-1	Grey expansion joint compound
BW-53-2	Grey expansion joint compound
BW-53-3	Grey expansion joint compound
BW-54-1	White exterior stucco
BW-54-2	White exterior stucco
BW-54-3	White exterior stucco
BW-54-4	White exterior stucco
BW-54-5	White exterior stucco
BW-54-6	White exterior stucco
BW-54-7	White exterior stucco
BW-55-1	White interior door caulking
BW-55-2	White interior door caulking
BW-55-3	White interior door caulking

TABLE II. SUMMARY OF ASBESTOS CONTAINING MATERIALS

Sample ID	Sample Description	% Asbestos
BW-3-1	Tan streaked 12” x 12” floor tile	8% Chrysotile
	Mastic	10% Chrysotile
BW-3-2	Tan streaked 12” x 12” floor tile	First positive stop
	Mastic	First positive stop
BW-3-3	Tan streaked 12” x 12” floor tile	First positive stop
	Mastic	First positive stop
BW-14-1	Black mastic associated with black foam glass	15% Chrysotile
BW-14-2	Black mastic associated with black foam glass	First positive stop
BW-14-3	Black mastic associated with black foam glass	First positive stop
BW-15-1	White block pipe insulation	20% Chrysotile
BW-15-2	White block pipe insulation	First positive stop
BW-15-3	White block pipe insulation	First positive stop
BW-18-1	Black mastic on fiberglass elbow	15% Chrysotile
BW-18-2	Black mastic on fiberglass elbow	First positive stop
BW-18-3	Black mastic on fiberglass elbow	First positive stop
BW-21-1	Interior door caulking	3% Chrysotile
BW-21-2	Interior door caulking	First positive stop
BW-21-3	Interior door caulking	First positive stop
BW-23-1	Tan with orange streaks 12” x 12” floor tile	10% Chrysotile
	Mastic	10% Chrysotile
BW-23-2	Tan with orange streaks 12” x 12” floor tile	First positive stop
	Mastic	First positive stop
BW-23-3	Tan with orange streaks 12” x 12” floor tile	First positive stop
	Mastic	First positive stop
BW-32-1	White overspray material	3% Chrysotile
BW-32-2	White overspray material	First positive stop
BW-32-3	White overspray material	First positive stop
BW-37-1	Black mastic on fiberglass pipe insulation	15% Chrysotile
BW-37-2	Black mastic on fiberglass pipe insulation	First positive stop
BW-37-3	Black mastic on fiberglass pipe insulation	First positive stop
BW-41-1	Tan with brown streaks 12” x 12” floor tile	4% Chrysotile
	Mastic	10% Chrysotile
BW-41-2	Tan with brown streaks 12” x 12” floor tile	First positive stop
	Mastic	First positive stop
BW-41-3	Tan with brown streaks 12” x 12” floor tile	First positive stop
	Mastic	First positive stop
BW-42-1	Light Tan 12” x 12” floor tile	10% Chrysotile
	Mastic	10% Chrysotile
BW-42-2	Light Tan 12” x 12” floor tile	First positive stop
	Mastic	First positive stop

TABLE II. SUMMARY OF ASBESTOS CONTAINING MATERIALS

Sample ID	Sample Description	% Asbestos
BW-42-3	Light Tan 12” x 12” floor tile	First positive stop
	Mastic	First positive stop
BW-43-1	Black mastic on cementitious elbows	10% Chrysotile
BW-43-2	Black mastic on cementitious elbows	First positive stop
BW-43-3	Black mastic on cementitious elbows	First positive stop
BW-45-1	Black mastic on seams of foam glass pipe insulation	10% Chrysotile
BW-45-2	Black mastic on seams of foam glass pipe insulation	First positive stop
BW-45-3	Black mastic on seams of foam glass pipe insulation	First positive stop
BW-54-1	White interior door caulking	2% Chrysotile
BW-54-2	White interior door caulking	First positive stop
BW-54-3	White interior door caulking	First positive stop

SUMMARY OF INSPECTION

The following tables summarize the physical assessment data, sampling and assessment results.

As exhibited on these tables, coding is used to abbreviate the asbestos containing materials' (ACM) locations, characteristics and results. These codes are as follows:

TYPES OF ACM:

Misc. = Miscellaneous

Sur. = Surfacing

TSI = Thermal System Insulation

ACM LOCATIONS:

Homogeneous areas = Indicated by Roman Numerals, Room Number or Area Designation

Functional Space No.:	Functional Space Type:
1.	F = Flooring
2.	P = Plumbing
3.	D = Doors
4.	S = Surfacing
5.	R = Roof

ACM CHARACTERISTICS:

F = Friable

NF = Non-Friable

ASSESSMENT RESULTS:

(Refer to Physical Assessment Data)

POTENTIAL FOR DISTURBANCE:

(Refer to Physical Assessment Data)

PHYSICAL ASSESSMENT CATAGORIES:

1. Damaged or significantly damaged friable thermal system insulation ACM.
2. Damaged friable surfacing ACM.
3. Significantly damaged friable surfacing ACM.
4. Damaged or significantly damaged friable miscellaneous ACM.
5. ACM with potential for significant damage.
6. ACM with potential for damage.
7. Any remaining friable ACM or friable suspect ACM.
8. Non-friable ACM.

CLASSIFICATION FOR HAZARD POTENTIAL:

(Tabular Display)

Hazard Rank	ACM Condition	ACM Disturbance Potential
7	Significantly Damaged	Any
6	Damaged	Potential for Significant Damage
5	Damaged	Potential for Damage
4	Damaged	Low
3	Good	Potential for Significant Damage
2	Good	Potential for Damage
1	Good	Low

PHYSICAL ASSESSMENT DATA SHEET

F&ME CONSULTANTS

Building: Bates West Residence Hall

Functional Space No: 1 **Type:** S **Location:** (See Homogeneous Area Plan)

Type of Suspect Material: _____ **TSI** **X** **Surfacing** _____ **Misc.**

Description: HA-1, ACM spray applied textured ceiling material

Approximate Amount of Material (SF or LF): ~65,000 S.F.

Condition:

Percent Damage: **X** >0% _____ <10% _____ >10% _____ <25% _____ >25%

Extent of Damage : _____ Localized **X** Distributed

Type of Damage: **X** Deterioration _____ Water _____ Physical

Description:

Asbestos-containing spray-applied ceiling texture is located on the ceilings in multiple areas throughout the building. Overall this material is intact with little damage being noted.

Overall Condition Rating:	Sig. Damaged	Damaged	Good
	_____	_____	**X**

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:	_____	_____	**X**	**X**
Influence of Vibration	_____	_____	**X**	**X**
Frequency of Air Erosion	_____	_____	**X**	**X**
Potential of Water Erosion	_____	_____	**X**	**X**

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
_____	_____	**7**

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
_____	_____	_____	**1**

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility.

Signed: _____ **Date:** **10/21/2015**

PHYSICAL ASSESSMENT DATA SHEET

F&ME CONSULTANTS

Building: Bates West Residence Hall

Functional Space No: 2 **Type:** P **Location:** (See Homogeneous Area Plan)

Type of Suspect Material: _____ **TSI** X **Surfacing** _____ **Misc.**

Description: HA-2, ACM joint compound associated with drywall wall and ceilings

Approximate Amount of Material (SF or LF): >300,000 S.F.

Condition:

Percent Damage: _____ >0% **X** <10% _____ >10% _____ <25% **X** >25%

Extent of Damage : _____ Localized **X** Distributed

Type of Damage: **X** Deterioration _____ Water _____ Physical

Description:

This ACM joint compound associated with the non-ACM drywall walls and ceilings is found throughout the building on all floors (see Homogeneous Area Plan). Both the drywall and the ACM joint compound are in an intact and good condition with little damage being noted.

Overall Condition Rating:	Sig. Damaged	Damaged	Good
	_____	_____	**X**

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:	_____	_____	**X**	_____
Influence of Vibration	_____	_____	**X**	_____
Frequency of Air Erosion	_____	_____	**X**	_____
Potential of Water Erosion	_____	_____	**X**	_____

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
_____	_____	**8**

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
_____	_____	_____	**1**

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility.

Signed: _____ **Date:** **10/21/2015**

PHYSICAL ASSESSMENT DATA SHEET

F&ME CONSULTANTS

Building: Bates West Residence Hall

Functional Space No: 2 **Type:** F **Location**: (See Homogeneous Area Plan)

Type of Suspect Material: ____ **TSI** ____ **Surfacing** X **Misc.**

Description: HA-3, ACM tan streaked 12" x 12" floor tile and associated mastic

Approximate Amount of Material (SF or LF): ~150 S.F.

Condition:

Percent Damage:	>0%	<10%	>10%	<25%	>25%
		X			

Extent of Damage :	Localized	Distributed
	X	

Type of Damage:	Deterioration	Water	Physical
	X	**X**	

Description:

Asbestos-containing ACM tan streaked 12" x 12" floor tile was observed in several locations in the building (see Homogeneous Area Plan). Where observed these materials were noted to be intact and in a good non-friable condition.

Overall Condition Rating:	Sig. Damaged	Damaged	Good
			X

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:			**X**	
Influence of Vibration			**X**	
Frequency of Air Erosion			**X**	
Potential of Water Erosion			**X**	

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
		8

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
			1

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility.

Signed: _____ **Date: 10/21/2015**

PHYSICAL ASSESSMENT DATA SHEET

F&ME CONSULTANTS

Building: Bates West Residence Hall

Functional Space No: 2 **Type:** P **Location:** (See Homogeneous Area Plan)

Type of Suspect Material: ____ **TSI** ____ **Surfacing** X **Misc.**

Description: HA-4, ACM black mastic associated with black foam glass

Approximate Amount of Material (SF or LF): ~2,000 S.F.

Condition:

Percent Damage:	>0%	<10%	>10%	<25%	>25%
		X			

Extent of Damage :	Localized	Distributed
	X	

Type of Damage:	Deterioration	Water	Physical
	X	**X**	**X**

Description:

Asbestos-containing black mastic associated with cellular foam glass pipe insulation was observed throughout the building (see Homogeneous Area Plan). Where observed this material was noted to be in good condition.

Overall Condition Rating:	Sig. Damaged	Damaged	Good
			X

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:			**X**	
Influence of Vibration			**X**	
Frequency of Air Erosion			**X**	
Potential of Water Erosion			**X**	

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
		8

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
			1

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility.

Signed: _____ **Date:** **10/21/2015**

PHYSICAL ASSESSMENT DATA SHEET

F&ME CONSULTANTS

Building:

Functional Space No: 2 **Type:** EW **Location**: (See Homogeneous Area Plan)

Type of Suspect Material: **TSI** **X** **Surfacing** **Misc.**

Description: HA-5, ACM white block pipe insulation

Approximate Amount of Material (SF or LF): >2,000 L.F.

Condition:

Percent Damage:	>0%	<10%	>10%	<25%	>25%
		X			

Extent of Damage :	Localized	Distributed
	X	

Type of Damage:	Deterioration	Water	Physical
	X	**X**	**X**

Description:

ACM white block pipe insulation was observed in numerous locations throughout the building (see Homogeneous Area Plan). Where observed this material was noted to be mostly an intact condition. However, exposed unwrapped ends with some localized damage were noted in mechanical rooms where previous abatement had terminated and was friable.

Overall Condition Rating:	Sig. Damaged	Damaged	Good
		X	

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:			**X**	**X**
Influence of Vibration		**X**		**X**
Frequency of Air Erosion		**X**		**X**
Potential of Water Erosion			**X**	**X**

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
	1	

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
		5	

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility.

Signed: **Date:** **10/21/2015**

PHYSICAL ASSESSMENT DATA SHEET

F&ME CONSULTANTS

Building:

Functional Space No: 2 **Type:** P **Location**: (See Homogeneous Area Plan)

Type of Suspect Material: **X** **TSI** **Surfacing** **Misc.**

Description: HA-6, ACM black mastic on fiberglass elbows

Approximate Amount of Material (SF or LF): >1,000 S.F.

Condition:

Percent Damage:	>0%	**X**	<10%	>10%	<25%	>25%
Extent of Damage :	**X**	Localized		Distributed		
Type of Damage:	**X**	Deterioration	**X**	Water	**X**	Physical

Description:

Asbestos-containing black mastic on fittings associated with fiberglass pipe insulation was observed throughout the building (see Homogeneous Area Plan). Where observed this material was noted to be in good non-friable condition.

Overall Condition Rating:	Sig. Damaged	Damaged	Good
			X

Potential for Disturbance:

	High	**Moderate**	**Low**	**Friable ACM**
Frequency of Potential Contact:			**X**	
Influence of Vibration			**X**	
Frequency of Air Erosion			**X**	
Potential of Water Erosion			**X**	

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
		8

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
			1

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility.

Signed: **Date:** **10/21/2015**

PHYSICAL ASSESSMENT DATA SHEET

F&ME CONSULTANTS

Building: Bates West Residence Hall

Functional Space No: 2 **Type:** D **Location**: (See Homogeneous Area Plan)

Type of Suspect Material: ____ **TSI** ____ **Surfacing** X **Misc.**

Description: HA-7, ACM interior door caulking

Approximate Amount of Material (SF or LF): ~800 L.F.

Condition:

Percent Damage: **X** >0% ____ <10% ____ >10% ____ <25% ____ >25%

Extent of Damage : ____ Localized ____ Distributed

Type of Damage: ____ Deterioration ____ Water ____ Physical

Description:

ACM door caulking was noted on all stairwell doors on all floors of the building (see Homogeneous Area Plan). Where observed this material was noted to be in good non-friable condition.

Overall Condition Rating: Sig. Damaged ____ Damaged **X** Good ____

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:			**x**	
Influence of Vibration			**X**	
Frequency of Air Erosion			**X**	
Potential of Water Erosion			**X**	

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
		8

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
			1

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility.

Signed: ____ **Date:** **10/21/2015**

PHYSICAL ASSESSMENT DATA SHEET

F&ME CONSULTANTS

Building: Bates West Residence Hall

Functional Space No: 1 **Type:** F **Location:** (See Homogeneous Area Plan)

Type of Suspect Material: ____ **TSI** ____ **Surfacing** X **Misc.**

Description: HA-8, ACM tan with orange streaks 12" x 12" floor tile and associated mastic

Approximate Amount of Material (SF or LF): ~150 S.F.

Condition:

Percent Damage:		>0%	X	<10%		>10%		<25%		>25%
Extent of Damage :		Localized		X	Distributed					
Type of Damage:	X	Deterioration	X	Water	X	Physical				

Description:

Asbestos-containing tan with orange streaks 12" x 12" floor tile and associated mastic was located in numerous locations throughout the building (see Homogeneous Area Plan). Overall, this material was in an intact non-friable condition, but showed evidence of wear and deterioration from age.

Overall Condition Rating:	Sig. Damaged		Damaged		Good	X

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:			X	
Influence of Vibration			X	
Frequency of Air Erosion			X	
Potential of Water Erosion			X	

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
		8

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
			1

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility.

Signed: _____ **Date:** **10/21/2015**

PHYSICAL ASSESSMENT DATA SHEET

F&ME CONSULTANTS

Building: Bates West Residence Hall

Functional Space No: 1 **Type:** F **Location:** (See Homogeneous Area Plan)

Type of Suspect Material: ____ **TSI** ____ **Surfacing** X **Misc.**

Description: HA-9, ACM tan with brown streaks 12" x 12" floor tile and associated mastic

Approximate Amount of Material (SF or LF): ~400 S.F.

Condition:

Percent Damage:		>0%	X	<10%		>10%		<25%		>25%
Extent of Damage :	X	Localized		Distributed						
Type of Damage:	X	Deterioration	X	Water		Physical				

Description:

Asbestos-containing tan with brown streaks 12" x 12" floor tiles and associated mastic was observed in numerous locations throughout the building (see Homogeneous Area Plan). Where observed these materials were noted to be in good non-friable condition.

Overall Condition Rating:	Sig. Damaged		Damaged		Good	X

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:			X	
Influence of Vibration			X	
Frequency of Air Erosion			X	
Potential of Water Erosion			X	

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
		8

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
			1

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility.

Signed: _____ **Date:** **10/21/2015**

PHYSICAL ASSESSMENT DATA SHEET

F&ME CONSULTANTS

Building: Bates West Residence Hall

Functional Space No: 1 **Type:** F **Location**: (See Homogeneous Area Plan)

Type of Suspect Material: ____ **TSI** ____ **Surfacing** X **Misc.**

Description: HA-10, ACM Light tan 12" x 12" floor tile and associated mastic

Approximate Amount of Material (SF or LF): ~450 S.F.

Condition:

Percent Damage:	>0%	<10%	>10%	<25%	>25%
		X			

Extent of Damage :	Localized	Distributed
		X

Type of Damage:	Deterioration	Water	Physical
	X	**X**	

Description:

Asbestos-containing light tan streaked 12" x12" floor tile and associated mastic were observed in numerous locations throughout the building (see Homogeneous Area Plan). Overall, this material was in an intact non-friable condition, but showed evidence of wear and deterioration from age.

Overall Condition Rating:	Sig. Damaged	Damaged	Good
			X

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:			**X**	
Influence of Vibration			**X**	
Frequency of Air Erosion			**X**	
Potential of Water Erosion			**X**	

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
		8

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
			1

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility.

Signed: _____ **Date:** **10/21/2015**

PHYSICAL ASSESSMENT DATA SHEET

F&ME CONSULTANTS

Building: Bates West Residence Hall

Functional Space No: 2 **Type:** P **Location:** (See Homogeneous Area Plan)

Type of Suspect Material: **X** **TSI** _____ **Surfacing** _____ **Misc.**

Description: HA-11, ACM black mastic on cementitious elbows

Approximate Amount of Material (SF or LF): >500 S.F.

Condition:

Percent Damage: _____ >0% **X** <10% _____ >10% _____ <25% _____ >25%

Extent of Damage : **X** Localized _____ Distributed

Type of Damage: **X** Deterioration **X** Water _____ Physical

Description:

Asbestos-containing black mastic on cementitious elbows was observed throughout the building (see Homogeneous Area Plans). Where observed this material was noted to be in a good non-friable condition.

Overall Condition Rating: Sig. Damaged _____ Damaged _____ Good **X**

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:			**X**	
Influence of Vibration			**X**	
Frequency of Air Erosion			**X**	
Potential of Water Erosion			**X**	

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
		8

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
			1

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility.

Signed: _____ **Date:** **10/21/2015**

PHYSICAL ASSESSMENT DATA SHEET

F&ME CONSULTANTS

Building: Bates West Residence Hall

Functional Space No: 2 **Type:** P **Location:** (See Homogeneous Area Plan)

Type of Suspect Material: ____ **TSI** ____ **Surfacing** X **Misc.**

Description: HA-12, Black mastic on seams of foam glass pipe insulation

Approximate Amount of Material (SF or LF): ~3,500 L.F.

Condition:

Percent Damage:	>0%	<10%	>10%	<25%	>25%
		X			

Extent of Damage :	Localized	Distributed
	X	

Type of Damage:	Deterioration	Water	Physical
	X	**X**	

Description:

ACM black mastic was noted on seams of cellular foam glass pipe insulation. This material was observed above suspended ceilings and in mechanical rooms throughout the building (sees Homogeneous Area Plan). Where observed this material was in an intact non-friable condition.

Overall Condition Rating:	Sig. Damaged	Damaged	Good
			X

Potential for Disturbance:

	High	**Moderate**	**Low**	**Friable ACM**
Frequency of Potential Contact:			**X**	
Influence of Vibration			**X**	
Frequency of Air Erosion			**X**	
Potential of Water Erosion			**X**	

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
		8

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
			1

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility.

Signed: _____ **Date:** **10/21/2015**

PHYSICAL ASSESSMENT DATA SHEET

F&ME CONSULTANTS

Building: Bates West Residence Hall

Functional Space No: 3 **Type:** D **Location**: (See Homogeneous Area Plan)

Type of Suspect Material: _____ **TSI** _____ **Surfacing** X **Misc.**

Description: HA-13, – White interior door caulking associated with exit doors

Approximate Amount of Material (SF or LF): ~50 S.F.

Condition:

Percent Damage: **X** >0% _____ <10% _____ >10% _____ <25% _____ >25%

Extent of Damage : _____ Localized _____ Distributed

Type of Damage: _____ Deterioration _____ Water _____ Physical

Description:

Asbestos-containing interior door caulking was observed on the first floor level associated with the side exit doors (see Homogeneous Area Plans). Where observed this material was noted to be in good intact non-friable condition.

Overall Condition Rating: Sig. Damaged _____ Damaged _____ Good **X**

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:			**X**	
Influence of Vibration			**X**	
Frequency of Air Erosion			**X**	
Potential of Water Erosion			**X**	

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
		8

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
			1

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility.

Signed: _____ **Date:** **10/21/2015**

PHYSICAL ASSESSMENT DATA SHEET

F&ME CONSULTANTS

Building: Bates West Residence Hall

Functional Space No: 5 **Type:** R **Location:** (See Homogeneous Area Plan)

Type of Suspect Material: _____ **TSI** _____ **Surfacing** **X** **Misc.**

Description: HA-14, – Black built-up roofing felt (Assumed)

Approximate Amount of Material (SF or LF): ~8,000 S.F.

Condition:

Percent Damage:	**X**	>0%	_____	<10%	_____	>10%	_____	<25%	_____	>25%
Extent of Damage :	_____	Localized	**X**	Distributed						
Type of Damage:	**X**	Deterioration	**X**	Water	**X**	Physical				

Description:

Black built-up roofing felt under stone was observed on the main roof level as well the elevator machine room level (see Homogeneous Area Plans). Where observed this material was noted to be in good intact non-friable condition. Prior to demolition activities, this material must be sampled for asbestos content.

Overall Condition Rating:	Sig. Damaged	_____	Damaged	_____	Good	**X**

Potential for Disturbance:

	High	**Moderate**	**Low**	**Friable ACM**
Frequency of Potential Contact:	_____	_____	**X**	_____
Influence of Vibration	_____	_____	**X**	_____
Frequency of Air Erosion	_____	_____	**X**	_____
Potential of Water Erosion	_____	_____	**X**	_____

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
_____	_____	**8**

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
_____	_____	_____	**1**

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility.

Signed: _____ **Date:** **10/21/2015**

PHYSICAL ASSESSMENT DATA SHEET

F&ME CONSULTANTS

Building: Bates West Residence Hall

Functional Space No: 5 **Type:** R **Location:** (See Homogeneous Area Plan)

Type of Suspect Material: ____ **TSI** ____ **Surfacing** X **Misc.**

Description: HA-15, – Black rolled-on roof flashing (Assumed)

Approximate Amount of Material (SF or LF): ~500 S.F.

Condition:

Percent Damage:	X	>0%		<10%		>10%		<25%		>25%
Extent of Damage :		Localized	X	Distributed						
Type of Damage:	X	Deterioration	X	Water		Physical				

Description:

Black rolled-on roof flashing was observed along the perimeter and along the base of the elevator machine room on the main roof level. (see Homogeneous Area Plans). Where observed this material was noted to be in good intact non-friable condition.

Overall Condition Rating:	Sig. Damaged		Damaged		Good	X

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:			X	
Influence of Vibration			X	
Frequency of Air Erosion			X	
Potential of Water Erosion			X	

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
		8

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
			1

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility.

Signed: _____ **Date:** **10/21/2015**

PHYSICAL ASSESSMENT DATA SHEET

F&ME CONSULTANTS

Building: Bates West Residence Hall

Functional Space No: 5 **Type:** R **Location:** (See Homogeneous Area Plan)

Type of Suspect Material: **TSI** X **Surfacing** X **Misc.**

Description: HA-16, White caulking at top of metal counterflashing (Assumed)

Approximate Amount of Material (SF or LF): ~500 S.F.

Condition:

Percent Damage:	X	>0%		<10%		>10%		<25%		>25%

Extent of Damage :		Localized	X	Distributed

Type of Damage:	X	Deterioration	X	Water		Physical

Description:

White caulking was observed to be associated with the perimeter counterflashing at top of all flashing found on both the main roof and the penthouse roof (see Homogeneous Area Plans). Where observed this material was noted to be in an intact non-friable condition.

Overall Condition Rating:	Sig. Damaged		Damaged		Good	X

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:			X	
Influence of Vibration			X	
Frequency of Air Erosion			X	
Potential of Water Erosion			X	

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
		8

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
			1

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility.

Signed: _____ **Date:** **10/21/2015**

PHYSICAL ASSESSMENT DATA SHEET

F&ME CONSULTANTS

Building: Bates West Residence Hall

Functional Space No: 5 **Type:** R **Location:** (See Homogeneous Area Plan)

Type of Suspect Material: **TSI** **Surfacing** X **Misc.**

Description: HA-17, Gray louver caulking (Assumed)

Approximate Amount of Material (SF or LF): ~25 L.F.

Condition:

Percent Damage:	X	>0%		<10%		>10%		<25%		>25%

Extent of Damage :		Localized	X	Distributed

Type of Damage:	X	Deterioration	X	Water		Physical

Description:

Gray louver window caulking was observed on the side of the elevator machine room on the main roof level (see Homogeneous Area Plans). Where observed this material was noted to be in good intact non-friable condition.

Overall Condition Rating:	Sig. Damaged		Damaged		Good	X

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:			X	
Influence of Vibration			X	
Frequency of Air Erosion			X	
Potential of Water Erosion			X	

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
		8

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
			1

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility.

Signed: _____ **Date:** **10/21/2015**

PHYSICAL ASSESSMENT DATA SHEET

F&ME CONSULTANTS

Building: Bates West Residence Hall

Functional Space No: 5 **Type:** R **Location**: (See Homogeneous Area Plan)

Type of Suspect Material: ____ **TSI** ____ **Surfacing** X **Misc.**

Description: HA-18, – Black roof mastic associated with all roof penetrations (Assumed)

Approximate Amount of Material (SF or LF): ~250 S.F.

Condition:

Percent Damage: **X** >0% ____ <10% ____ >10% ____ <25% ____ >25%

Extent of Damage : ____ Localized **X** Distributed

Type of Damage: **X** Deterioration **X** Water ____ Physical

Description:

Black roof mastic associated with all roof penetrations was observed on the main roof level. (see Homogeneous Area Plans). Where observed this material was noted to be in good intact non-friable condition.

Overall Condition Rating: Sig. Damaged ____ Damaged ____ Good **X**

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:			**X**	
Influence of Vibration			**X**	
Frequency of Air Erosion			**X**	
Potential of Water Erosion			**X**	

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
		8

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
			1

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility.

Signed: ____ **Date:** **10/21/2015**

PHYSICAL ASSESSMENT DATA SHEET

F&ME CONSULTANTS

Building: Bates West Residence Hall

Functional Space No: 5 **Type:** R **Location**: (See Homogeneous Area Plan)

Type of Suspect Material: _____ **TSI** _____ **Surfacing** X **Misc.**

Description: HA-19, Black rolled-on roofing felt (Assumed)

Approximate Amount of Material (SF or LF): ~300 S.F.

Condition:

Percent Damage: _____ >0% **X** <10% _____ >10% _____ <25% _____ >25%

Extent of Damage : **X** Localized _____ Distributed

Type of Damage: **X** Deterioration **X** Water _____ Physical

Description:

Black rolled-on roofing felt was observed to be associated with the front overhang roofing system (see Homogeneous Area Plan). Where observed this material was observed to be in good condition.

Overall Condition Rating: Sig. Damaged _____ Damaged _____ Good **X**

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:			**X**	
Influence of Vibration			**X**	
Frequency of Air Erosion			**X**	
Potential of Water Erosion			**X**	

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
		8

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
			1

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility.

Signed: _____ **Date:** **10/21/2015**

EMSL Analytical, Inc.
706 Gralin Street, Kernersville, NC 27284
Phone/Fax: (336) 992-1025 / (336) 992-4175
http://www.EMSL.com greensborolab@emsl.com

EMSL Order:	021505522
CustomerID:	FMEC62
CustomerPO:	E5550.050
ProjectID:	

Attn: **Glynn Ellen**
F & ME Consultants
3112 Divine Street

Columbia, SC 29205

Phone:	(803) 254-4540
Fax:	(803) 254-4542
Received:	10/09/15 10:20 AM
Analysis Date:	10/13/2015
Collected:	

Project: **E5550.050 Asbestos Identification Survey - Bates West (University of South Carolina)**

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
BW-1-1 *021505522-0001*	Orange Line Elbow-Fiberglass Pipe Ins (Mud ONLY)	Gray Fibrous Homogeneous	30% Min. Wool 1% Cellulose	69% Non-fibrous (other)	**None Detected**
BW-1-2 *021505522-0002*	Orange Line Elbow-Fiberglass Pipe Ins (Mud ONLY)	Gray Non-Fibrous Homogeneous	30% Min. Wool 1% Cellulose	69% Non-fibrous (other)	**None Detected**
BW-1-3 *021505522-0003*	Orange Line Elbow-Fiberglass Pipe Ins (Mud ONLY)	Gray/Orange Fibrous Heterogeneous	1% Cellulose 25% Min. Wool	74% Non-fibrous (other)	**None Detected**
BW-2-1 *021505522-0004*	Blue Line Elbow-Fiberglass Pipe Ins (Mud ONLY)	Gray/Tan Fibrous Homogeneous	30% Min. Wool 1% Cellulose	69% Non-fibrous (other)	**None Detected**
BW-2-2 *021505522-0005*	Blue Line Elbow-Fiberglass Pipe Ins (Mud ONLY)	Gray Fibrous Homogeneous	30% Min. Wool 1% Cellulose	69% Non-fibrous (other)	**None Detected**
BW-2-3 *021505522-0006*	Blue Line Elbow-Fiberglass Pipe Ins (Mud ONLY)	Gray/Black/Blue Fibrous Heterogeneous	1% Cellulose 20% Min. Wool	79% Non-fibrous (other)	**None Detected**
BW-3-1-Floor Tile *021505522-0007*	Tan Streaked 12x12 Floor Tile/Mastic	Tan/Beige Fibrous Homogeneous		15% Quartz 77% Non-fibrous (other)	**8% Chrysotile**
BW-3-1-Mastic *021505522-0007A*	Tan Streaked 12x12 Floor Tile/Mastic	Black Fibrous Homogeneous	2% Cellulose	88% Non-fibrous (other)	**10% Chrysotile**

Analyst(s)

Stephen Bennett (36)
Scott Combs (58)

Stephen Bennett, Laboratory Manager
or other approved signatory

Report Amended: 10/13/2015 15:31:16 Replaces Report Amended: 10/13/2015 15:19:33. Reason Code: Client-Samples Removed

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Project: **E5550.050 Asbestos Identification Survey - Bates West (University of South Carolina)**

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

			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**		**% Type**
BW-3-2 *021505522-0008*	Tan Streaked 12x12 Floor Tile/Mastic						**Stop Positive (Not Analyzed)**
BW-4-1-Floor Tile *021505522-0009*	Black 12x12 Floor Tile/Mastic	Black Non-Fibrous Homogeneous			20% 80%	Quartz Non-fibrous (other)	**None Detected**
BW-4-1-Mastic *021505522-0009A*	Black 12x12 Floor Tile/Mastic	Yellow/Beige Non-Fibrous Heterogeneous	<1% <1%	Cellulose Synthetic	100%	Non-fibrous (other)	**None Detected**
BW-4-2-Floor Tile *021505522-0010*	Black 12x12 Floor Tile/Mastic	Gray/Black Non-Fibrous Homogeneous			15% 85%	Quartz Non-fibrous (other)	**None Detected**
BW-4-2-Mastic *021505522-0010A*	Black 12x12 Floor Tile/Mastic	Tan Non-Fibrous Homogeneous	<1%	Cellulose	100%	Non-fibrous (other)	**None Detected**
BW-5-1-Floor Tile *021505522-0011*	Red 12x12 Floor Tile/Mastic	Red Non-Fibrous Homogeneous			20% 80%	Quartz Non-fibrous (other)	**None Detected**
BW-5-1-Mastic *021505522-0011A*	Red 12x12 Floor Tile/Mastic	Yellow/Beige/Gold Non-Fibrous Heterogeneous	<1% <1%	Synthetic Cellulose	100%	Non-fibrous (other)	**None Detected**
BW-5-2-Floor Tile *021505522-0012*	Red 12x12 Floor Tile/Mastic	Red Non-Fibrous Homogeneous			15% 85%	Quartz Non-fibrous (other)	**None Detected**

Analyst(s)

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Scott Combs (58)

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

			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**		**% Type**
BW-5-2-Mastic *021505522-0012A*	Red 12x12 Floor Tile/Mastic	Tan Non-Fibrous Homogeneous	<1% <1%	Cellulose Synthetic	100%	Non-fibrous (other)	**None Detected**
BW-6-1 *021505522-0013*	2x4 Pinhole Punctured Suspended Ceiling Tiles	Gray/Tan/White Fibrous Homogeneous	40% 30%	Cellulose Min. Wool	20% 10%	Perlite Non-fibrous (other)	**None Detected**
BW-6-2 *021505522-0014*	2x4 Pinhole Punctured Suspended Ceiling Tiles	Gray/Tan/White Fibrous Homogeneous	40% 30%	Cellulose Min. Wool	20% 10%	Perlite Non-fibrous (other)	**None Detected**
BW-6-3 *021505522-0015*	2x4 Pinhole Punctured Suspended Ceiling Tiles	Gray/White Fibrous Heterogeneous	40% 30%	Cellulose Min. Wool	20% 10%	Perlite Non-fibrous (other)	**None Detected**
BW-7-1-Cove Base *021505522-0016*	Black Cove Base/Gold Mastic	Gray/Black Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
BW-7-1-Mastic *021505522-0016A*	Black Cove Base/Gold Mastic	Yellow Non-Fibrous Homogeneous	1% <1%	Synthetic Cellulose	99%	Non-fibrous (other)	**None Detected**
BW-7-2-Cove Base *021505522-0017*	Black Cove Base/Gold Mastic	Black Non-Fibrous Heterogeneous			100%	Non-fibrous (other)	**None Detected**
BW-7-2-Mastic *021505522-0017A*	Black Cove Base/Gold Mastic	Beige Non-Fibrous Homogeneous	<1%	Cellulose	100%	Non-fibrous (other)	**None Detected**

Analyst(s)

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Scott Combs (58)

Stephen Bennett, Laboratory Manager
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			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**		**% Type**
BW-8-1-Cove Base *021505522-0018*	Black Cove Base/Brown Mastic	Gray/Black Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
BW-8-1-Mastic *021505522-0018A*	Black Cove Base/Brown Mastic	Brown/Gold Non-Fibrous Homogeneous	1%	Cellulose	99%	Non-fibrous (other)	**None Detected**
BW-8-2-Cove Base *021505522-0019*	Black Cove Base/Brown Mastic	Black Non-Fibrous Heterogeneous			100%	Non-fibrous (other)	**None Detected**
BW-8-2-Mastic *021505522-0019A*	Black Cove Base/Brown Mastic	Brown Non-Fibrous Homogeneous	<1%	Cellulose	100%	Non-fibrous (other)	**None Detected**
BW-9-1 *021505522-0020*	White Sink Undercoating	Beige Fibrous Homogeneous	15%	Cellulose	85%	Non-fibrous (other)	**None Detected**
BW-9-2 *021505522-0021*	White Sink Undercoating	Beige Fibrous Homogeneous	12%	Cellulose	88%	Non-fibrous (other)	**None Detected**
BW-10-1 *021505522-0022*	White Scar & Pitted 2x2 Ceiling Tile	Gray/White Fibrous Heterogeneous	45% 10%	Cellulose Min. Wool	40% 5%	Perlite Non-fibrous (other)	**None Detected**
BW-10-2 *021505522-0023*	White Scar & Pitted 2x2 Ceiling Tile	Gray/White Fibrous Heterogeneous	45% 10%	Cellulose Min. Wool	40% 5%	Perlite Non-fibrous (other)	**None Detected**

Analyst(s)

Stephen Bennett (36)
Scott Combs (58)

Stephen Bennett, Laboratory Manager
or other approved signatory

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F & ME Consultants
3112 Divine Street

Columbia, SC 29205

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Project: **E5550.050 Asbestos Identification Survey - Bates West (University of South Carolina)**

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

			Non-Asbestos			Asbestos	
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**	**%**	**Type**
BW-10-3 *021505522-0024*	White Scar & Pitted 2x2 Ceiling Tile	Gray/White Fibrous Heterogeneous	40% 10%	Cellulose Min. Wool	40% Perlite 10% Non-fibrous (other)		**None Detected**
BW-11-1 *021505522-0025*	Green Firestop	Green Non-Fibrous Homogeneous			100% Non-fibrous (other)		**None Detected**
BW-11-2 *021505522-0026*	Green Firestop	Green Non-Fibrous Homogeneous			100% Non-fibrous (other)		**None Detected**
BW-12-1 *021505522-0027*	Red Firestop	Black/Rust/Orange Fibrous Homogeneous	5% <1%	Synthetic Cellulose	95% Non-fibrous (other)		**None Detected**
BW-12-2 *021505522-0028*	Red Firestop	Red Non-Fibrous Homogeneous			100% Non-fibrous (other)		**None Detected**
BW-13-1 *021505522-0029*	Black Expansion Joint Compound	Black Non-Fibrous Homogeneous			100% Non-fibrous (other)		**None Detected**
BW-13-2 *021505522-0030*	Black Expansion Joint Compound	Black Non-Fibrous Homogeneous			100% Non-fibrous (other)		**None Detected**
BW-14-1 *021505522-0031*	Black Mastic Assoc w/ Black Foam Glass	Black Fibrous Homogeneous	1% <1% <1%	Cellulose Wollastonite Glass	84% Non-fibrous (other)	**15%**	**Chrysotile**

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Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
BW-14-2 *021505522-0032*	Black Mastic Assoc w/ Black Foam Glass				**Stop Positive (Not Analyzed)**
BW-14-3 *021505522-0033*	Black Mastic Assoc w/ Black Foam Glass				**Stop Positive (Not Analyzed)**
BW-15-1 *021505522-0034*	White Block Pipe Insulation	White/Beige Fibrous Heterogeneous	15% Cellulose 1% Synthetic	64% Non-fibrous (other)	**20% Chrysotile**
BW-15-2 *021505522-0035*	White Block Pipe Insulation				**Stop Positive (Not Analyzed)**
BW-15-3 *021505522-0036*	White Block Pipe Insulation				**Stop Positive (Not Analyzed)**
BW-17-1 *021505522-0037*	Elbow Assoc w/ White Block Pipe Insulation	Gray Fibrous Homogeneous	30% Min. Wool 1% Cellulose	69% Non-fibrous (other)	**None Detected**
BW-17-2 *021505522-0038*	Elbow Assoc w/ White Block Pipe Insulation	Gray Fibrous Homogeneous	30% Min. Wool 1% Cellulose	69% Non-fibrous (other)	**None Detected**
BW-17-3 *021505522-0039*	Elbow Assoc w/ White Block Pipe Insulation	Gray Fibrous Heterogeneous	10% Cellulose 25% Min. Wool	65% Non-fibrous (other)	**None Detected**
BW-18-1 *021505522-0040*	Black Mastic on Fiberglass Elbow (Mastic ONLY)	Black Fibrous Homogeneous	1% Cellulose	84% Non-fibrous (other)	**15% Chrysotile**

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			Non-Asbestos				Asbestos	
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**%**	**Type**
BW-19-1 *021505522-0041*	White Heater Exhaust Duct Mastic (Mastic ONLY)	White Non-Fibrous Homogeneous	<1%	Cellulose	100%	Non-fibrous (other)		**None Detected**
BW-19-2 *021505522-0042*	White Heater Exhaust Duct Mastic (Mastic ONLY)	White Non-Fibrous Homogeneous	1%	Synthetic	99%	Non-fibrous (other)		**None Detected**
BW-20-1 *021505522-0043*	Pink Firestop Caulk	Pink Fibrous Homogeneous	5%	Cellulose	30% 65%	Ca Carbonate Non-fibrous (other)		**None Detected**
BW-20-2 *021505522-0044*	Pink Firestop Caulk	Pink Fibrous Homogeneous	5%	Cellulose	20% 75%	Ca Carbonate Non-fibrous (other)		**None Detected**
BW-21-1 *021505522-0045*	Door Caulking	Gray/White Non-Fibrous Homogeneous	<1%	Cellulose	97%	Non-fibrous (other)	**3%**	**Chrysotile**
BW-21-2 *021505522-0046*	Door Caulking							**Stop Positive (Not Analyzed)**
BW-22-1 *021505522-0047*	White Duct Mastic	White Non-Fibrous Homogeneous	1%	Cellulose	99%	Non-fibrous (other)		**None Detected**
BW-22-2 *021505522-0048*	White Duct Mastic	White Non-Fibrous Homogeneous	3%	Cellulose	97%	Non-fibrous (other)		**None Detected**

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			Non-Asbestos				Asbestos	
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**%**	**Type**
BW-23-1-Tan/Orange Tile *021505522-0049*	Tan w/ Orange Streaks 12x12 Floor Tile/Mastic	Tan/Orange Fibrous Homogeneous			15% 75%	Quartz Non-fibrous (other)	**10%**	**Chrysotile**
BW-23-1-Mastic *021505522-0049A*	Tan w/ Orange Streaks 12x12 Floor Tile/Mastic	Black Fibrous Homogeneous	2%	Cellulose	88%	Non-fibrous (other)	**10%**	**Chrysotile**
BW-23-2 *021505522-0050*	Tan w/ Orange Streaks 12x12 Floor Tile/Mastic						**Stop Positive (Not Analyzed)**	
BW-24-1 *021505522-0051*	Maroon Line Pipe Elbow assoc w/ Fiberglass Insulat	Gray/Tan/Red Fibrous Heterogeneous	30% 3%	Min. Wool Cellulose	67%	Non-fibrous (other)	**None Detected**	
BW-24-2 *021505522-0052*	Maroon Line Pipe Elbow assoc w/ Fiberglass Insulat	Silver/Beige/Orange Fibrous Heterogeneous	95% <1%	Glass Cellulose	5%	Non-fibrous (other)	**None Detected**	
BW-24-3 *021505522-0053*	Maroon Line Pipe Elbow assoc w/ Fiberglass Insulat	Gray/White/Red Fibrous Heterogeneous	8% 25%	Cellulose Min. Wool	67%	Non-fibrous (other)	**None Detected**	
BW-25-1 *021505522-0054*	Yellow Carpet Mastic Assoc. w/ Apartment Room	Yellow/Beige/Gold Non-Fibrous Heterogeneous	<1% <1%	Synthetic Cellulose	100%	Non-fibrous (other)	**None Detected**	
BW-25-2 *021505522-0055*	Yellow Carpet Mastic Assoc. w/ Apartment Room	Tan Non-Fibrous Homogeneous	<1% <1%	Cellulose Synthetic	100%	Non-fibrous (other)	**None Detected**	

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			Non-Asbestos			Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**	**% Type**
BW-26-1-Cove Base *021505522-0056*	Tan Cove Base/Mastic	Tan Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
BW-26-1-Mastic *021505522-0056A*	Tan Cove Base/Mastic	Yellow Non-Fibrous Homogeneous	<1% <1%	Synthetic Cellulose	100% Non-fibrous (other)	**None Detected**
BW-26-2-Cove Base *021505522-0057*	Tan Cove Base/Mastic	Beige Non-Fibrous Heterogeneous			100% Non-fibrous (other)	**None Detected**
BW-26-2-Mastic *021505522-0057A*	Tan Cove Base/Mastic	Brown/Beige Non-Fibrous Heterogeneous	<1%	Cellulose	100% Non-fibrous (other)	**None Detected**
BW-27-1-Cove Base *021505522-0058*	Grey Cove Base/Mastic	Gray Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
BW-27-1-Mastic *021505522-0058A*	Grey Cove Base/Mastic	Yellow Non-Fibrous Homogeneous	<1%	Cellulose	100% Non-fibrous (other)	**None Detected**
BW-27-2-Cove Base *021505522-0059*	Grey Cove Base/Mastic	Gray Non-Fibrous Heterogeneous			100% Non-fibrous (other)	**None Detected**
BW-27-2-Mastic *021505522-0059A*	Grey Cove Base/Mastic	Beige Non-Fibrous Homogeneous	<1%	Cellulose	100% Non-fibrous (other)	**None Detected**

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
BW-28-1-Floor Tile *021505522-0060*	New Tan Streaked 12x12 Floor Tile/Yellow Mastic	Tan/Beige Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (other)	**None Detected**
BW-28-1-Mastic *021505522-0060A*	New Tan Streaked 12x12 Floor Tile/Yellow Mastic	Yellow/Gold Non-Fibrous Homogeneous	<1% Cellulose <1% Synthetic	100% Non-fibrous (other)	**None Detected**
BW-28-2-Floor Tile *021505522-0061*	New Tan Streaked 12x12 Floor Tile/Yellow Mastic	Tan/Beige Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (other)	**None Detected**
BW-28-2-Mastic *021505522-0061A*	New Tan Streaked 12x12 Floor Tile/Yellow Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (other)	**None Detected**
BW-29-1-Floor Tile *021505522-0062*	White Sreaked 12x12 Floor Tile/Yellow Mastic	Beige Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (other)	**None Detected**
BW-29-1-Mastic *021505522-0062A*	White Sreaked 12x12 Floor Tile/Yellow Mastic	Yellow/Gold Non-Fibrous Homogeneous	<1% Cellulose <1% Synthetic	100% Non-fibrous (other)	**None Detected**
BW-30-1 *021505522-0063*	Exterior Gray Door Caulking	Gray/Rust Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BW-30-2 *021505522-0064*	Exterior Gray Door Caulking	Gray/White Non-Fibrous Heterogeneous	<1% Cellulose	100% Non-fibrous (other)	**None Detected**

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
BW-31-1 *021505522-0065*	2x2 Smooth Ceiling Tiles	Gray/White Fibrous Homogeneous	90% Min. Wool <1% Cellulose	10% Non-fibrous (other)	**None Detected**
BW-31-2 *021505522-0066*	2x2 Smooth Ceiling Tiles	Gray/White Fibrous Homogeneous	90% Min. Wool <1% Cellulose	10% Non-fibrous (other)	**None Detected**
BW-31-3 *021505522-0067*	2x2 Smooth Ceiling Tiles	Gray/White Fibrous Heterogeneous	90% Min. Wool <1% Cellulose	10% Non-fibrous (other)	**None Detected**
BW-32-1 *021505522-0068*	White Overspray Material	Gray/White/Beige Non-Fibrous Homogeneous	1% Cellulose	15% Mica 20% Ca Carbonate 61% Non-fibrous (other)	**3% Chrysotile**
BW-32-2 *021505522-0069*	White Overspray Material				**Stop Positive (Not Analyzed)**
BW-32-3 *021505522-0070*	White Overspray Material				**Stop Positive (Not Analyzed)**
BW-33-1 *021505522-0071*	White Mastic-Fiberglass Pipe Insulation (Mastic ON	White/Beige Fibrous Homogeneous	40% Cellulose <1% Glass	60% Non-fibrous (other)	**None Detected**
BW-33-2 *021505522-0072*	White Mastic-Fiberglass Pipe Insulation (Mastic ON	White Non-Fibrous Homogeneous	30% Cellulose <1% Glass	70% Non-fibrous (other)	**None Detected**

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			Non-Asbestos				Asbestos	
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**%**	**Type**
BW-34-1 *021505522-0073*	Gold Carpet Mastic	Gold/Rust/Orange Non-Fibrous Homogeneous	1% <1%	Synthetic Cellulose	99%	Non-fibrous (other)		**None Detected**
BW-34-2 *021505522-0074*	Gold Carpet Mastic	Tan Non-Fibrous Homogeneous	<1%	Cellulose	100%	Non-fibrous (other)		**None Detected**
BW-35-1 *021505522-0075*	Black Vapor Barrier Felt	Brown/Black Fibrous Homogeneous	80%	Cellulose	20%	Non-fibrous (other)		**None Detected**
BW-35-2 *021505522-0076*	Black Vapor Barrier Felt	Black Fibrous Homogeneous	70%	Cellulose	30%	Non-fibrous (other)		**None Detected**
BW-36-1 *021505522-0077*	Gold Ceramic Tile Mastic	Tan Non-Fibrous Homogeneous	<1% <1%	Cellulose Synthetic	100%	Non-fibrous (other)		**None Detected**
BW-36-2 *021505522-0078*	Gold Ceramic Tile Mastic	Tan Non-Fibrous Homogeneous	<1%	Cellulose	100%	Non-fibrous (other)		**None Detected**
BW-37-1 *021505522-0079*	Black Mastic on Fiberglass Pipe Insulation	Black Fibrous Homogeneous	1%	Cellulose	84%	Non-fibrous (other)	**15%**	**Chrysotile**
BW-37-2 *021505522-0080*	Black Mastic on Fiberglass Pipe Insulation							**Stop Positive (Not Analyzed)**

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			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**		**% Type**
BW-38-1 *021505522-0081*	Grey Mastic on Metal Ductwork	Gray Non-Fibrous Homogeneous	<1%	Cellulose	100%	Non-fibrous (other)	**None Detected**
BW-38-2 *021505522-0082*	Grey Mastic on Metal Ductwork	Gray Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
BW-39-1-Cove Base *021505522-0083*	Black Cove Base/Mastic	Black Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
BW-39-1-Mastic *021505522-0083A*	Black Cove Base/Mastic	Tan Non-Fibrous Homogeneous	<1%	Cellulose	100%	Non-fibrous (other)	**None Detected**
BW-40-1 *021505522-0084*	Canvas Wrap on Blue Line	Brown/White/Blue Fibrous Heterogeneous	70%	Cellulose	30%	Non-fibrous (other)	**None Detected**
BW-40-2 *021505522-0085*	Canvas Wrap on Blue Line	Brown/White/Blue Fibrous Heterogeneous	70%	Cellulose	30%	Non-fibrous (other)	**None Detected**
BW-40-3 *021505522-0086*	Canvas Wrap on Blue Line	White/Blue Fibrous Heterogeneous	50%	Cellulose	50%	Non-fibrous (other)	**None Detected**

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Collected:	

Project: **E5550.050 Asbestos Identification Survey - Bates West (University of South Carolina)**

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

SAMPLE ID	DESCRIPTION	APPEARANCE	% MATRIX MATERIAL	% NON-ASBESTOS FIBERS	ASBESTOS TYPES
BW-4-3-Black Floor Tile *021505522-0089*		Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
BW-4-3-Mastic *021505522-0090*		Gray/Yellow Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
BW-5-3-Red Floor Tile *021505522-0091*		Red Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
BW-5-3-Mastic *021505522-0092*		Gray/Yellow Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
BW-7-3-Black Cove Base *021505522-0093*		Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
BW-7-3-Mastic *021505522-0094*		Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
BW-8-3-Black Cove Base *021505522-0095*		Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
BW-8-3-Mastic *021505522-0096*		Brown Non-Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)

Stephen Bennett (27)

Stephen Bennett, Laboratory Manager
or other approved signatory

Initial report from 10/15/2015 09:27:35

EMSL Analytical, Inc.
706 Gralin Street, Kernersville, NC 27284
Phone/Fax: (336) 992-1025 / (336) 992-4175
http://www.EMSL.com greensborolab@emsl.com

EMSL Order:	021505522
CustomerID:	FMEC62
CustomerPO:	E5550.050
ProjectID:	

Attn: **Glynn Ellen**
F & ME Consultants
3112 Divine Street

Columbia, SC 29205

Phone:	(803) 254-4540
Fax:	(803) 254-4542
Received:	10/09/15 10:20 AM
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Project: **E5550.050 Asbestos Identification Survey - Bates West (University of South Carolina)**

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

SAMPLE ID	DESCRIPTION	APPEARANCE	% MATRIX MATERIAL	% NON-ASBESTOS FIBERS	ASBESTOS TYPES
BW-9-3 White Sink Undercoating *021505522-0097*		Beige Fibrous Homogeneous	100	None	No Asbestos Detected
BW-11-3 Green Firestop *021505522-0098*		Green Non-Fibrous Homogeneous	100	None	No Asbestos Detected
BW-12-3 Red Firestop *021505522-0099*		Red Non-Fibrous Homogeneous	100	None	No Asbestos Detected
BW-13-3 Black Expansion Joint *021505522-0100*		Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
BW-19-3 White Duct Mastic *021505522-0102*		White/Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
BW-20-3 Pink Firestop Caulk *021505522-0103*		Pink Non-Fibrous Homogeneous	100	None	No Asbestos Detected
BW-25-3 Yellow Carpet Mastic *021505522-0105*		Yellow Non-Fibrous Homogeneous	100	None	No Asbestos Detected
BW-26-3-Tan Cove Base *021505522-0106*		Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)

Stephen Bennett (27)

Stephen Bennett, Laboratory Manager
or other approved signatory

This laboratory is not responsible for % asbestos in total sample when the residue only is submitted for analysis. The above report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. Samples received in good condition unless otherwise noted. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample.

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

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Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

SAMPLE ID	DESCRIPTION	APPEARANCE	% MATRIX MATERIAL	% NON-ASBESTOS FIBERS	ASBESTOS TYPES
BW-26-3-Mastic *021505522-0107*		Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
BW-27-3-Grey Cove Base *021505522-0108*		Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
BW-27-3-Mastic *021505522-0109*		Brown/Yellow Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
BW-28-3-Tan Floor Tile *021505522-0110*		Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
BW-28-3-Mastic *021505522-0111*		Yellow/Orange Non-Fibrous Homogeneous	100	None	No Asbestos Detected
BW-30-3 Grey Door Caulking *021505522-0114*		Gray/Black Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
BW-33-3 White Mastic *021505522-0115*		White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
BW-34-3 Gold Carpet Mastic *021505522-0116*		Tan/Gold Non-Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)

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Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

SAMPLE ID	DESCRIPTION	APPEARANCE	% MATRIX MATERIAL	% NON-ASBESTOS FIBERS	ASBESTOS TYPES
BW-35-3 Black Vapor Barrier Felt *021505522-0117*		Black Fibrous Homogeneous	100	None	No Asbestos Detected
BW-36-3 Gold Ceramic Tile Mastic *021505522-0118*		Brown/Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
BW-38-3 Grey Mastic *021505522-0119*		Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)

Stephen Bennett (27)

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or other approved signatory

Initial report from 10/15/2015 09:27:35

5522

Chain of Custody

Asbestos Lab Services

EMSL Analytical, Inc.
706 Gralin Street
Kernersville, NC 27284

Phone: (336) 992-1025
Fax: (336) 992-4175
http://www.emsl.com

Please print all information legibly. * 9 Samples Pending *

Company:	F&ME Consultants	***Bill To:***	F&ME Consultants
Address1:	3112 Devine Street	*Address1:*	P.O. Box 5855
Address2:		*Address2:*	
City, State:	Columbia, South Carolina	*City, State:*	Columbia, South Carolina
Zip/Post Code:	29205	*Zip/Post Code:*	29250
Country:	USA	*Country:*	USA
Contact Name:	Glynn Ellen	***Attn:***	Jim Kelleher
Phone:	803 254-4540	*Phone:*	803 777-1208
Fax:	803 254-4542	*Fax:*	803 777-1028
Email:	glynn@fmecol.com jtimmons@fmecol.com	*Email:*	jkelleher@fmecol.com
EMSL Rep:	Jason McDonald	***P.O. Number:***	E5550.050
Project Name/Number:	E5550.050 - Asbestos Identification Survey – Bates West (University of South Carolina)		

MATRIX			TURNAROUND			
☐ Air	☐ Soil	☐ Micro-Vac	☐ 3 Hours	☐ 6 Hours	☐ Same Day or 12 Hours*	☐ 24 Hours (1day)
☑ Bulk	☐ Drinking Water		☐ 48 Hours (2 days)	☑ 72 Hours (3 days) 8	☐ 96 Hours (4 days) 23	☐ 120 Hours (5 days)
☐ Wipe	☐ Wastewater		☐ 144+ hours (6-10 days)			+9 = 32

TEM AIR, 3 hours, 6 hours, Please call ahead to schedule. There is a premium charge for 3-hour tat, please call 1-800-220-3675 for price prior to sending samples. You will be asked to sign an authorization form for this service.
***12 hours (must arrive by 11:00a.m. Mon -Fri.), Please Refer to Price Quote**

PCM - Air	**TEM Air**	**TEM WATER**
☐ NIOSH 7400(A) Issue 2: August 1994	☐ AHERA 40 CFR, Part 763 Subpart E	☐ EPA 100.1
☐ OSHA w/TWA	☐ NIOSH 7402	☐ EPA 100.2
☐ Other:	☐ EPA Level II	☐ NYS 198.2
PLM - Bulk	**TEM BULK**	**TEM Microvac/Wipe**
☑ EPA 600/R-93/116	☐ Drop Mount (Qualitative)	☐ ASTM D 5755-95 (quantative method)
☐ EPA Point Count	☐ Chatfield SOP - 1988-02	☐ Wipe Qualitative
☐ NY Stratified Point Count	☑ TEM NOB (Gravimetric) NYS 198.4	
☐ PLM NOB (Gravimetric) NYS 198.1	☐ EMSL Standard Addition:	**XRD**
☐ NIOSH 9002:		☐ Asbestos
☐ EMSL Standard Addition:	**PLM Soil**	☐ Silica NIOSH 7500
SEM Air or Bulk	☐ EPA Protocol Qualitative	
☐ Qualitative	☐ EPA Protocol Quantitative	**OTHER**
☐ Quantitative	☐ EMSL MSD 9000 Method fibers/gram	☐

Chain of Custody

Asbestos Lab Services

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Kernersville, NC 27284

Phone: (336) 992-1025
Fax: (336) 992-4175
http://www.emsl.com

Please print all information legibly.

Client Sample # BW-1-1 to BW-40-3 **Total Samples #:** 109

Relinquished: Jim Timmons JT NS **Date:** 10/8/2015 **Time:** 17:00

Received: _____ **Date:** 10/9/15 **Time:** 10:20

Relinquished: DEMSL FX 8067711246447 **Date:** _____ **Time:** _____

Received: _____ **Date:** _____ **Time:** _____

NOTE: FIRST POSITIVE STOP PROTOCAL. ALSO, FOR SAMPLES DENOTED WITH AN ASTERICK (*), IF THE FIRST TWO SAMPLES' RESULTS ARE NEGATIVE, RUN LAST SAMPLE AS TEM BULK FOR NEGATIVE CONFIRMATION. SOUTH CAROLINA GUIDELINES.

SAMPLE NUMBER		SAMPLE DESCRIPTION/LOCATION	VOLUME (if applicable)
1	BW-1-1	Orange Line Elbow associated with Fiberglass Pipe Insulation (Mud Only)	
2	BW-1-2	Orange Line Elbow associated with Fiberglass Pipe Insulation (Mud Only)	
3	BW-1-3	Orange Line Elbow associated with Fiberglass Pipe Insulation (Mud Only)	
4	BW-2-1	Blue Line Elbow associated with Fiberglass Pipe Insulation (Mud Only)	
5	BW-2-2	Blue Line Elbow associated with Fiberglass Pipe Insulation (Mud Only)	
6	BW-2-3	Blue Line Elbow associated with Fiberglass Pipe Insulation (Mud Only)	
7	BW-3-1	Tan Streaked 12"x12" Floor Tile & Mastic	
8	BW-3-2	Tan Streaked 12"x12" Floor Tile & Mastic	
9	BW-3-3*.	(Sample pending)	
10	BW-4-1	Black 12"x12" Floor Tile & Mastic	
11	BW-4-2	Black 12"x12" Floor Tile & Mastic	
12	BW-4-3*	Black 12"x12" Floor Tile & Mastic	
13	BW-5-1	Red 12"x12" Floor Tile & Mastic	
14	BW-5-2	Red 12"x12" Floor Tile & Mastic	
15	BW-5-3*	Red 12"x12" Floor Tile & Mastic	
16	BW-6-1	2'x4' Pinhole Punctured Suspended Ceiling Tiles	
17	BW-6-2	2'x4' Pinhole Punctured Suspended Ceiling Tiles	
18	BW-6-3	2'x4' Pinhole Punctured Suspended Ceiling Tiles	
19	BW-7-1	Black Cove Base & Gold Mastic	
20	BW-7-2	Black Cove Base & Gold Mastic	
21	BW-7-3*	Black Cove Base & Gold Mastic	
22	BW-8-1	Black Cove Base & Brown Mastic	

5522

23	BW-8-2	Black Cove Base & Brown Mastic	
24	BW-8-3*	Black Cove Base & Brown Mastic	
25	BW-9-1	White Sink Undercoating	
26	BW-9-2	White Sink Undercoating	
27	BW-9-3*	White Sink Undercoating	
28	BW-10-1	White Scar & Pitted 2'x2' Ceiling Tiles	
29	BW-10-2	White Scar & Pitted 2'x2' Ceiling Tiles	
30	BW-10-3	White Scar & Pitted 2'x2' Ceiling Tiles	
31	BW-11-1	Green Firestop	
32	BW-11-2	Green Firestop	
33	BW-11-3*	Green Firestop	
34	BW-12-1	Red Firestop	
35	BW-12-2	Red Firestop	
36	BW-12-3*	Red Firestop	
37	BW-13-1	Black Expansion Joint Compound	
38	BW-13-2	Black Expansion Joint Compound	
39	BW-13-3*	Black Expansion Joint Compound	
40	BW-14-1	Black Mastic associated with Black Foam Glass	
41	BW-14-2	Black Mastic associated with Black Foam Glass	
42	BW-14-3	Black Mastic associated with Black Foam Glass	
43	BW-14-4*	Black Mastic associated with Black Foam Glass	
44	BW-15-1	White Block Pipe Insulation	
45	BW-15-2	White Block Pipe Insulation	
46	BW-15-3	White Block Pipe Insulation	
47	BW-17-1	Elbow associated with White Block Pipe Insulation	
48	BW-17-2	Elbow associated with White Block Pipe Insulation	
49	BW-17-3	Elbow associated with White Block Pipe Insulation	
50	BW-18-1	Black Mastic on Fiberglass Elbow (Mastic Only)	
51	BW-18-2	(sample pending)	
52	BW-18-3*	(sample pending)	
53	BW-19-1	White Heater Exhaust Duct Mastic (Mastic Only)	
54	BW-19-2	White Heater Exhaust Duct Mastic (Mastic Only)	
55	BW-19-3*	White Heater Exhaust Duct Mastic (Mastic Only)	
56	BW-20-1	Pink Firestop Caulk	
57	BW-20-2	Pink Firestop Caulk	
58	BW-20-3*	Pink Firestop Caulk	
59	BW-21-1	Door Caulking	
60	BW-21-2	Door Caulking	
61	BW-21-3*	Door Caulking	
62	BW-22-1	White Duct Mastic	
63	BW-22-2	White Duct Mastic	
64	BW-22-3*	(sample pending)	

5522

65	BW-23-1	Tan w/Orange Streaks 12"x12" Floor Tile & Mastic	
66	BW-23-2	Tan w/Orange Streaks 12"x12" Floor Tile & Mastic	
67	BW-23-3*	(sample pending)	
68	BW-24-1	Maroon Line Pipe Elbow associated w/Fiberglass Insulation	
69	BW-24-2	Maroon Line Pipe Elbow associated w/Fiberglass Insulation	
70	BW-24-3	Maroon Line Pipe Elbow associated w/Fiberglass Insulation	
71	BW-25-1	Yellow Carpet Mastic associated w/Apartment Room	
72	BW-25-2	Yellow Carpet Mastic associated w/Apartment Room	
73	BW-25-3*	Yellow Carpet Mastic associated w/Apartment Room	
74	BW-26-1	Tan Cove Base & Mastic	
75	BW-26-2	Tan Cove Base & Mastic	
76	BW-26-3*	Tan Cove Base & Mastic	
77	BW-27-1	Grey Cove Base & Mastic	
78	BW-27-2	Grey Cove Base & Mastic	
79	BW-27-3*	Grey Cove Base & Mastic	
80	BW-28-1	New Tan Streaked 12"x12"Floor Tile & Yellow Mastic	
81	BW-28-2	New Tan Streaked 12"x12"Floor Tile & Yellow Mastic	
82	BW-28-3*	New Tan Streaked 12"x12"Floor Tile & Yellow Mastic	
83	BW-29-1	White Streaked 12"x12" Floor Tile & Yellow Mastic	
84	BW-29-2	(sample pending)	
85	BW-29-3*	(sample pending)	
86	BW-30-1	Exterior Gray Door Caulking	
87	BW-30-2	Exterior Gray Door Caulking	
88	BW-30-3*	Exterior Gray Door Caulking	
89	BW-31-1	2'x 2' Smooth Ceiling Tiles	
90	BW-31-2	2'x 2' Smooth Ceiling Tiles	
91	BW-31-3	2'x 2' Smooth Ceiling Tiles	
92	BW-32-1	White Overspray Material	
93	BW-32-2	White Overspray Material	
94	BW-32-3	White Overspray Material	
95	BW-33-1	White Mastic on end of Fiberglass Pipe Insulation (Mastic Only)	
96	BW-33-2	White Mastic on end of Fiberglass Pipe Insulation (Mastic Only)	
97	BW-33-3*	White Mastic on end of Fiberglass Pipe Insulation (Mastic Only)	
98	BW-34-1	Gold Carpet Mastic	
99	BW-34-2	Gold Carpet Mastic	
100	BW-34-3*	Gold Carpet Mastic	
101	BW-35-1	Black Vapor Barrier Felt	
102	BW-35-2	Black Vapor Barrier Felt	
103	BW-35-3*	Black Vapor Barrier Felt	
104	BW-36-1	Gold Ceramic Tile Mastic	

105	BW-36-2	Gold Ceramic Tile Mastic	
106	BW-36-3*	Gold Ceramic Tile Mastic	
107	BW-37-1	Black Mastic on Fiberglass Pipe Insulation	
108	BW-37-2	Black Mastic on Fiberglass Pipe Insulation	
109	BW-37-3*	Black Mastic on Fiberglass Pipe Insulation	
110	BW-38-1	Grey Mastic on Metal Ductwork	
111	BW-38-2	Grey Mastic on Metal Ductwork	
112	BW-38-3*	Grey Mastic on Metal Ductwork	
113	BW-39-1	Black Cove Base & Mastic	
114	BW-39-2	(sample pending)	
115	BW-39-3*	(sample pending)	
116	BW-40-1	Canvas Wrap on Blue Line	
117	BW-40-2	Canvas Wrap on Blue Line	
118	BW-40-3	Canvas Wrap on Blue Line	

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EMSL Order:	021505672
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Project: **E5550.050 - Asbestos Indentification Survey - Bates West (University of South Carolina) Follow-Up**

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
BW-29-2-Floor Tile *021505672-0002*	White Streaked 12x12 Floor Tile/Yellow Mastic	Beige Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (other)	**None Detected**
BW-29-2-Mastic *021505672-0002A*	White Streaked 12x12 Floor Tile/Yellow Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (other)	**<1% Chrysotile**
BW-39-2-Cove Base *021505672-0003*	Black Cove Base/Mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BW-39-2-Mastic *021505672-0003A*	Black Cove Base/Mastic	Beige Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BW-39-2-Joint Compound *021505672-0003B*	Black Cove Base/Mastic	Beige Non-Fibrous Homogeneous		10% Ca Carbonate 88% Non-fibrous (other)	**2% Chrysotile**
BW-41-1-Floor Tile *021505672-0004*	Tan w/ Brown Streaks 12x12 Floor Tile/Mastic	Tan/Beige Non-Fibrous Homogeneous		15% Quartz 81% Non-fibrous (other)	**4% Chrysotile**
BW-41-1-Mastic *021505672-0004A*	Tan w/ Brown Streaks 12x12 Floor Tile/Mastic	Black Fibrous Homogeneous		90% Non-fibrous (other)	**10% Chrysotile**
BW-41-2-Floor Tile *021505672-0005*	Tan w/ Brown Streaks 12x12 Floor Tile/Mastic				**Stop Positive (Not Analyzed)**

Analyst(s)

Kristie Elliott (40)
Scott Combs (12)

Stephen Bennett, Laboratory Manager
or other approved signatory

Initial report from 10/19/2015 16:39:48

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

			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**		**% Type**
BW-41-2-Mastic *021505672-0005A*	Tan w/ Brown Streaks 12x12 Floor Tile/Mastic						**Stop Positive (Not Analyzed)**
BW-42-1-Floor Tile *021505672-0006*	Light Tan 12x12 Floor Tile/Mastic	Gray/Beige Non-Fibrous Homogeneous			15% 80%	Quartz Non-fibrous (other)	**5% Chrysotile**
BW-42-1-Mastic *021505672-0006A*	Light Tan 12x12 Floor Tile/Mastic	Black Non-Fibrous Homogeneous			90%	Non-fibrous (other)	**10% Chrysotile**
BW-42-2-Floor Tile *021505672-0007*	Light Tan 12x12 Floor Tile/Mastic						**Stop Positive (Not Analyzed)**
BW-42-2-Mastic *021505672-0007A*	Light Tan 12x12 Floor Tile/Mastic						**Stop Positive (Not Analyzed)**
BW-43-1-Black Mastic *021505672-0008*	Black Mastic on Cementitious Elbows	Black Non-Fibrous Homogeneous			90%	Non-fibrous (other)	**10% Chrysotile**
BW-43-1-Insulation *021505672-0008A*	Black Mastic on Cementitious Elbows	Gray Fibrous Homogeneous	30% 1%	Min. Wool Cellulose	69%	Non-fibrous (other)	**None Detected**
BW-43-2-Black Mastic *021505672-0009*	Black Mastic on Cementitious Elbows						**Stop Positive (Not Analyzed)**

Analyst(s)

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			Non-Asbestos			Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**	**% Type**
BW-43-2-Insulation *021505672-0009A*	Black Mastic on Cementitious Elbows	Gray/Tan Fibrous Homogeneous	30% Min. Wool 1% Cellulose		69% Non-fibrous (other)	**None Detected**
BW-44-1 *021505672-0010*	Leveling Compound	Gray Fibrous Homogeneous	5% Cellulose		95% Non-fibrous (other)	**None Detected**
BW-44-2 *021505672-0011*	Leveling Compound	Gray Non-Fibrous Homogeneous	5% Cellulose		95% Non-fibrous (other)	**None Detected**
BW-44-3 *021505672-0012*	Leveling Compound	Gray/Tan/Rust Fibrous Heterogeneous	5% Cellulose		95% Non-fibrous (other)	**None Detected**
BW-45-1-Black Mastic *021505672-0013*	Black Mastic Associated w/ Seems of Flam Glass TSI	Black Fibrous Homogeneous			90% Non-fibrous (other)	**10% Chrysotile**
BW-45-1-Insulation *021505672-0013A*	Black Mastic Associated w/ Seems of Flam Glass TSI	Black Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
BW-45-2-Black Mastic *021505672-0014*	Black Mastic Associated w/ Seems of Flam Glass TSI					**Stop Positive (Not Analyzed)**
BW-45-2-Insulation *021505672-0014A*	Black Mastic Associated w/ Seems of Flam Glass TSI	Gray/Black Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**

Analyst(s)

Kristie Elliott (40)
Scott Combs (12)

Stephen Bennett, Laboratory Manager
or other approved signatory

Initial report from 10/19/2015 16:39:48

EMSL Analytical, Inc.
706 Gralin Street, Kernersville, NC 27284
Phone/Fax: (336) 992-1025 / (336) 992-4175
http://www.EMSL.com greensborolab@emsl.com

EMSL Order:	021505672
CustomerID:	FMEC62
CustomerPO:	E5550.050
ProjectID:	

Attn: **Glynn Ellen**
F & ME Consultants
3112 Divine Street

Columbia, SC 29205

Phone:	(803) 254-4540
Fax:	(803) 254-4542
Received:	10/15/15 10:00 AM
Analysis Date:	10/19/2015
Collected:	

Project: **E5550.050 - Asbestos Indentification Survey - Bates West (University of South Carolina) Follow-Up**

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

			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**		**% Type**
BW-46-1 *021505672-0015*	White Pipe Flange Mastic	White Non-Fibrous Homogeneous	<1%	Cellulose	100%	Non-fibrous (other)	**None Detected**
BW-46-2 *021505672-0016*	White Pipe Flange Mastic	Tan/White Fibrous Heterogeneous	10% <1%	Glass Cellulose	90%	Non-fibrous (other)	**None Detected**
BW-47-1 *021505672-0017*	Tan Skim Coat	Beige Non-Fibrous Homogeneous	3%	Wollastonite	97%	Non-fibrous (other)	**None Detected**
BW-47-2 *021505672-0018*	Tan Skim Coat	Beige Non-Fibrous Homogeneous	3%	Wollastonite	97%	Non-fibrous (other)	**None Detected**
BW-47-3 *021505672-0019*	Tan Skim Coat	Beige Non-Fibrous Homogeneous	3%	Wollastonite	97%	Non-fibrous (other)	**None Detected**
BW-47-4 *021505672-0020*	Tan Skim Coat	Beige Non-Fibrous Homogeneous	1%	Wollastonite	99%	Non-fibrous (other)	**None Detected**
BW-47-5 *021505672-0021*	Tan Skim Coat	Beige Non-Fibrous Homogeneous	3%	Wollastonite	97%	Non-fibrous (other)	**None Detected**
BW-47-6 *021505672-0022*	Tan Skim Coat	Beige Non-Fibrous Homogeneous	3%	Wollastonite	97%	Non-fibrous (other)	**None Detected**

Analyst(s)

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

			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**		**% Type**
BW-47-7 *021505672-0023*	Tan Skim Coat	Tan Non-Fibrous Homogeneous	<1% 3%	Cellulose Wollastonite	97%	Non-fibrous (other)	**None Detected**
BW-48-1 *021505672-0024*	Black Window Glazing	Black Non-Fibrous Homogeneous	2%	Glass	98%	Non-fibrous (other)	**None Detected**
BW-48-2 *021505672-0025*	Black Window Glazing	Black Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
BW-49-1 *021505672-0026*	Grey Exterior Stucco ONLY	Gray Fibrous Homogeneous	5%	Glass	20% 75%	Quartz Non-fibrous (other)	**None Detected**
BW-49-2 *021505672-0027*	Grey Exterior Stucco ONLY	Gray Non-Fibrous Homogeneous	5%	Glass	20% 75%	Quartz Non-fibrous (other)	**None Detected**
BW-49-3 *021505672-0028*	Grey Exterior Stucco ONLY	Gray Fibrous Homogeneous	8%	Glass	20% 72%	Quartz Non-fibrous (other)	**None Detected**
BW-49-4 *021505672-0029*	Grey Exterior Stucco ONLY	Gray Fibrous Homogeneous	5%	Glass	20% 75%	Quartz Non-fibrous (other)	**None Detected**
BW-49-5 *021505672-0030*	Grey Exterior Stucco ONLY	Gray Non-Fibrous Homogeneous	<1% 5%	Cellulose Glass	20% 75%	Quartz Non-fibrous (other)	**None Detected**

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

			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**		**% Type**
BW-49-6 *021505672-0031*	Grey Exterior Stucco ONLY	Gray Fibrous Homogeneous	5%	Glass	20% 75%	Quartz Non-fibrous (other)	**None Detected**
BW-49-7 *021505672-0032*	Grey Exterior Stucco ONLY	Gray Fibrous Heterogeneous	5% <1%	Glass Cellulose	30% 65%	Quartz Non-fibrous (other)	**None Detected**
BW-50-1 *021505672-0033*	White Exterior Door Caulking	Beige Non-Fibrous Homogeneous	<1%	Cellulose	100%	Non-fibrous (other)	**None Detected**
BW-50-2 *021505672-0034*	White Exterior Door Caulking	Tan/Beige Non-Fibrous Homogeneous	<1%	Cellulose	100%	Non-fibrous (other)	**None Detected**
BW-51-1 *021505672-0035*	Black Door Window Glazing	Brown Non-Fibrous Homogeneous	<1%	Cellulose	100%	Non-fibrous (other)	**None Detected**
BW-51-2 *021505672-0036*	Black Door Window Glazing	Brown Non-Fibrous Homogeneous	<1%	Cellulose	100%	Non-fibrous (other)	**None Detected**
BW-52-1 *021505672-0037*	White Exterior Window Caulking	Gray/White Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
BW-52-2 *021505672-0038*	White Exterior Window Caulking	Beige Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**

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

			Non-Asbestos			Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**	**% Type**
BW-53-1 *021505672-0039*	Grey Expansion Joint Compound	Gray Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
BW-53-2 *021505672-0040*	Grey Expansion Joint Compound	Gray Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
BW-54-1 *021505672-0041*	White Exterior Stucco ONLY	White Non-Fibrous Homogeneous			25% Quartz 75% Non-fibrous (other)	**None Detected**
BW-54-2 *021505672-0042*	White Exterior Stucco ONLY	White Non-Fibrous Homogeneous	<1%	Cellulose	25% Quartz 75% Non-fibrous (other)	**None Detected**
BW-54-3 *021505672-0043*	White Exterior Stucco ONLY	White Non-Fibrous Homogeneous	<1%	Cellulose	25% Quartz 75% Non-fibrous (other)	**None Detected**
BW-54-4 *021505672-0044*	White Exterior Stucco ONLY	White Non-Fibrous Homogeneous	<1%	Cellulose	25% Quartz 75% Non-fibrous (other)	**None Detected**
BW-54-5 *021505672-0045*	White Exterior Stucco ONLY	White Non-Fibrous Homogeneous	<1%	Cellulose	25% Quartz 75% Non-fibrous (other)	**None Detected**
BW-54-6 *021505672-0046*	White Exterior Stucco ONLY	White Non-Fibrous Homogeneous	<1%	Cellulose	25% Quartz 75% Non-fibrous (other)	**None Detected**

Analyst(s)

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Project: **E5550.050 - Asbestos Indentification Survey - Bates West (University of South Carolina) Follow-Up**

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

			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**		**% Type**
BW-54-7 *021505672-0047*	White Exterior Stucco ONLY	Gray/White Non-Fibrous Homogeneous	1% <1%	Glass Cellulose	30% 69%	Quartz Non-fibrous (other)	**None Detected**
BW-55-1 *021505672-0048*	White Interior Door Caulking	Gray/White Fibrous Homogeneous			98%	Non-fibrous (other)	**2% Chrysotile**
BW-55-2 *021505672-0049*	White Interior Door Caulking						**Stop Positive (Not Analyzed)**

Analyst(s)

Kristie Elliott (40)
Scott Combs (12)

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Received:	10/15/15 10:00 AM
Analysis Date:	10/22/2015
Collected:	

Project: **E5550.050 - Asbestos Indentification Survey - Bates West (University of South Carolina) Follow-Up**

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

SAMPLE ID	DESCRIPTION	APPEARANCE	% MATRIX MATERIAL	% NON-ASBESTOS FIBERS	ASBESTOS TYPES
BW-22-3 *021505672-0001*	White Duct Tape	White Fibrous Heterogeneous	100	None	No Asbestos Detected
BW-29-3-Floor Tile *021505672-0050*	White Streaked 12x12 Floor Tile/Mastic	Beige Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
BW-29-3-Mastic *021505672-0051*	White Streaked 12x12 Floor Tile/Mastic	Yellow Non-Fibrous Homogeneous	100	None	No Asbestos Detected
BW-39-3-Cove Base *021505672-0052*	Black Cove Base/Mastic	Blue Non-Fibrous Homogeneous	100	None	No Asbestos Detected
BW-39-3-Mastic *021505672-0053*	Black Cove Base/Mastic	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
BW-46-3 *021505672-0054*	White Pipe Flange Mastic	White Fibrous Heterogeneous	100	None	No Asbestos Detected
BW-48-3 *021505672-0055*	Black Window Glazing	Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
BW-50-3 *021505672-0056*	White Exterior Door Caulking	Beige Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
BW-51-3 *021505672-0057*	Black Door Window Glazing	Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)

Stephen Bennett (11)

Stephen Bennett, Laboratory Manager
or other approved signatory

This laboratory is not responsible for % asbestos in total sample when the residue only is submitted for analysis. The above report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. Samples received in good condition unless otherwise noted. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample.

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from 10/22/2015 09:00:29

EMSL Analytical, Inc.
706 Gralin Street, Kernersville, NC 27284
Phone/Fax: (336) 992-1025 / (336) 992-4175
http://www.EMSL.com greensborolab@emsl.com

EMSL Order:	021505672
CustomerID:	FMEC62
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ProjectID:	

Attn: **Glynn Ellen**
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3112 Divine Street

Columbia, SC 29205

Phone:	(803) 254-4540
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Received:	10/15/15 10:00 AM
Analysis Date:	10/22/2015
Collected:	

Project: **E5550.050 - Asbestos Indentification Survey - Bates West (University of South Carolina) Follow-Up**

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

SAMPLE ID	DESCRIPTION	APPEARANCE	% MATRIX MATERIAL	% NON-ASBESTOS FIBERS	ASBESTOS TYPES
BW-52-3 *021505672-0058*	White Exterior Window Caulking	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
BW-53-3 *021505672-0059*	Grey Expansion Joint Compound	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)

Stephen Bennett (11)

Stephen Bennett, Laboratory Manager
or other approved signatory

Initial report from 10/22/2015 09:00:29

Chain of Custody

Asbestos Lab Services

5672

Please print all information legibly.

EMSL Analytical, Inc.
706 Gralin Street
Kernersville, NC 27284

Phone: (336) 992-1025
Fax: (336) 992-4175
http://www.emsl.com

Company:	F&ME Consultants	***Bill To:***	F&ME Consultants
Address1:	3112 Devine Street	*Address1:*	P.O. Box 5855
Address2:		*Address2:*	
City, State:	Columbia, South Carolina	*City, State:*	Columbia, South Carolina
Zip/Post Code:	29205	*Zip/Post Code:*	29250
Country:	USA	*Country:*	USA
Contact Name:	Glynn Ellen	***Attn:***	Jim Kelleher
Phone:	803 254-4540	*Phone:*	803 777-1208
Fax:	803 254-4542	*Fax:*	803 777-1028
Email:	glynn@fmecol.com jtimmons@fmecol.com	*Email:*	jkelleher@fmecol.com
EMSL Rep:	Jason McDonald	***P.O. Number:***	E5550.050
Project Name/Number:	E5550.050 - Asbestos Identification Survey – Bates West (University of South Carolina)Follow -up		

MATRIX			TURNAROUND			
☐ **Air**	☐ **Soil**	☐ **Micro-Vac**	☐ **3 Hours**	☐ **6 Hours**	☐ **Same Day or 12 Hours***	☐ **24 Hours (1day)**
☑ **Bulk**	☐ **Drinking Water**		☐ **48 Hours (2 days)**	☑ **72 Hours (3 days)**	☐ **96 Hours (4 days)**	☑ **120 Hours (5 days)**
☐ **Wipe**	☐ **Wastewater**		☐ **144+ hours (6-10 days)**			

TEM AIR, 3 hours, 6 hours, Please call ahead to schedule. There is a premium charge for 3-hour tat, please call 1-800-220-3675 for price prior to sending samples. You will be asked to sign an authorization form for this service.
***12 hours (must arrive by 11:00a.m. Mon -Fri.), Please Refer to Price Quote**

PCM - Air	**TEM Air**	**TEM WATER**
☐ NIOSH 7400(A) Issue 2: August 1994	☐ AHERA 40 CFR, Part 763 Subpart E	☐ EPA 100.1
☐ OSHA w/TWA	☐ NIOSH 7402	☐ EPA 100.2
☐ Other:	☐ EPA Level II	☐ NYS 198.2
PLM - Bulk	**TEM BULK**	**TEM Microvac/Wipe**
☑ EPA 600/R-93/116 (68)	☐ Drop Mount (Qualitative)	☐ ASTM D 5755-95 (quantative method)
☐ EPA Point Count	☐ Chatfield SOP - 1988-02	☐ Wipe Qualitative
☐ NY Stratified Point Count	☑ TEM NOB (Gravimetric) NYS 198.4 (1) (13)	
☐ PLM NOB (Gravimetric) NYS 198.1	☐ EMSL Standard Addition:	**XRD**
☐ NIOSH 9002:		☐ Asbestos
☐ EMSL Standard Addition:	**PLM Soil**	☐ Silica NIOSH 7500
SEM Air or Bulk	☐ EPA Protocol Qualitative	
☐ Qualitative	☐ EPA Protocol Quantitative	**OTHER**

5672

☐ Quantitative ☐ EMSL MSD 9000 Method fibers/gram ☐

Chain of Custody

Asbestos Lab Services

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http://www.emsl.com

Please print all information legibly.

(2) EMSL FX 8067711269 43

Client Sample # BW-22-3 to BW-55-3 **Total Samples #:** 109

Relinquished: Jim Timmons **Date:** 10/8/2015 **Time:** 17:00

Received: JH **Date:** 10/15/15 **Time:** 10:00

Relinquished: _____ **Date:** _____ **Time:** _____

Received: _____ **Date:** _____ **Time:** _____

NOTE: FIRST POSITIVE STOP PROTOCAL. ALSO, FOR SAMPLES DENOTED WITH AN ASTERICK (*), IF THE FIRST TWO SAMPLES' RESULTS ARE NEGATIVE, RUN LAST SAMPLE AS TEM BULK FOR NEGATIVE CONFIRMATION. SOUTH CAROLINA GUIDELINES.

	SAMPLE NUMBER	SAMPLE DESCRIPTION/LOCATION	VOLUME (if applicable)
1	*BW-22-3	(TEM NOB Sample) White duct mastic	TEM - Logged
2	BW-29-2	White streaked 12" x 12" floor tile and yellow mastic	
3	*BW-29-3	(TEM if 29-2 Neg.)White streaked 12" x 12" floor tile and yellow mastic	
3	BW-39-2	Black Cove Base & Mastic	
4	*BW-39-3	(TEM if 39-2 Neg.) Black Cove Base & Mastic	
5	BW-41-1	Tan with brown streaks 12" x 12" floor tile and mastic	
6	BW-41-2	Tan with brown streaks 12" x 12" floor tile and mastic	
7	*BW-41-3	Tan with brown streaks 12" x 12" floor tile and mastic	
7	BW-42-1	Light tan 12" x 12" floor tile and mastic	
8	BW-42-2	Light tan 12" x 12" floor tile and mastic	
9	*BW-42-3	Light tan 12" x 12" floor tile and mastic	
10	BW-43-1	Black mastic on cementitious elbows	
11	BW-43-2	Black mastic on cementitious elbows	
12	*BW-43-3	Black mastic on cementitious elbows	
13	BW-44-1	Leveling compound	
14	BW-44-2	Leveling compound	
15	BW-44-3	Leveling compound	
16	BW-45-1	Black mastic associated with seems of flam glass TSI	
17	BW-45-2	Black mastic associated with seems of flam glass TSI	
18	*BW-45-3	Black mastic associated with seems of flam glass TSI	
19	BW-46-1	White pipe flange mastic	
20	BW-46-2	White pipe flange mastic	
21	*BW-46-3	White pipe flange mastic	

5672

22	BW-47-1	Tan skim coat	
23	BW-47-2	Tan skim coat	
24	BW-47-3	Tan skim coat	
25	BW-47-4	Tan skim coat	
26	BW-47-5	Tan skim coat	
27	BW-47-6	Tan skim coat	
28	BW-47-7	Tan skim coat	
29	BW-48-1	Black window glazing	
30	BW-48-2	Black window glazing	
31	*BW-48-3	Black window glazing	
32	BW-49-1	Grey exterior stucco (stucco only)	
33	BW-49-2	Grey exterior stucco (stucco only)	
34	BW-49-3	Grey exterior stucco (stucco only)	
35	BW-49-4	Grey exterior stucco (stucco only)	
36	BW-49-5	Grey exterior stucco (stucco only)	
37	BW-49-6	Grey exterior stucco (stucco only)	
38	BW-49-7	Grey exterior stucco (stucco only)	
39	BW-50-1	White exterior door caulking	
40	BW-50-2	White exterior door caulking	
41	*BW-50-3	White exterior door caulking	
42	BW-51-1	Black door window glazing	
43	BW-51-2	Black door window glazing	
44	*BW-51-3	Black door window glazing	
45	BW-52-1	White exterior window caulking	
46	BW-52-2	White exterior window caulking	
47	*BW-52-3	White exterior window caulking	
48	BW-53-1	Grey expansion joint compound	
49	BW-53-2	Grey expansion joint compound	
50	*BW-53-3	Grey expansion joint compound	
51	BW-54-1	White exterior stucco (stucco only)	
52	BW-54-2	White exterior stucco (stucco only)	
53	BW-54-3	White exterior stucco (stucco only)	
54	BW-54-4	White exterior stucco (stucco only)	
55	BW-54-5	White exterior stucco (stucco only)	
56	BW-54-6	White exterior stucco (stucco only)	
57	BW-54-7	White exterior stucco (stucco only)	
58	BW-55-1	White interior door caulking	
59	BW-55-2	White interior door caulking	
60	*BW-55-3	White interior door caulking	

APPENDIX C

Personnel Certifications

SCDHEC ISSUED
Asbestos ID Card

James T Timmons

		Expires
CONSULTMP	MP-00196	02/25/16
AIRSAMPLER	AS-00423	02/24/16
SUPERAHERA	SA-02244	02/24/16

SCDHEC ISSUED
Asbestos ID Card

Glynn M Ellen

		Expires
AIRSAMPLER	AS-00079	02/24/16
SUPERAHERA	SA-00455	02/24/16
CONSULTPD	PD-00098	06/10/16
CONSULTMP	ASB-22641	02/25/16

APPENDIX D

SCDHEC Regulation Summary
SCDHEC Abatement Project Forms

Asbestos Regulatory Information

Renovations & Demolitions

Definitions

Renovation means altering a facility or one or more facility components in any way, including the stripping or removal of regulated asbestos-containing materials (RACM) from a facility component. "Remodeling" is considered renovation.

Demolition is wrecking or taking out any load-supporting structural member of a facility together and any related handling operations. Structural burns are prohibited by State Open Burning Regulations.

Applicability

Renovation and demolition of most facilities (including buildings, structures, and other installations), are subject to State and Federal asbestos regulations. Certain residential buildings may be exempt. Contact the SCDHEC Asbestos Section for additional information.

All asbestos-containing materials must be removed from a facility prior to demolition. Only the following asbestos-containing materials (ACM) may be left in place during demolition:

- ACM on a facility component that is encased in concrete or other similarly hard material and is adequately wet whenever exposed during demolition
- RACM that was not accessible for testing and was, therefore, not discovered until after demolition began and, as a result of the demolition, cannot be safely removed. If not removed for safety reasons, all exposed RACM and any asbestos-contaminated debris must be treated as regulated asbestos-containing waste material. Category I and Category II non-friable mastic, glue, and adhesive ACM that is not friable or in poor condition, and where the probability is low that the materials will become crumbled, pulverized, or reduced to powder during demolition operations.
- Category I and Category II non-friable mastic, glue, and adhesive ACM that is not friable or in poor condition, and where the probability is low that the materials will become crumbled, pulverized, or reduced to powder during demolition operations.

The facility owner and the renovation or demolition contractor are both responsible for ensuring compliance with these regulations.

Building Inspections

Before a facility or a portion of a facility is renovated or demolished, the owner/operator of the facility or renovation or demolition activity must ensure that the facility or portion of the facility being renovated or demolished has been thoroughly inspected for the presence of asbestos. The inspection must be performed by a person who has been trained and licensed as an Asbestos Building Inspector or management planner in accordance with State training and licensing requirements.

The inspector must identify, quantify, and assess the condition of all suspect asbestos-containing material, either friable or non-friable, on interior and exterior portions of the facility. The inspector must also comply with the procedures specified in Regulation 61-86.1 VI D. In addition, the inspector is required to prepare a written report detailing the findings of the inspection. At a minimum, the report must include information required in Regulation 61-86.1 VI C. A legible copy of the building inspection report must be provided to the Department prior to each demolition, and upon request for renovations. **(Note:** " BUILDING INSPECTIONS "**can be consulted for a detailed explanation of the aforementioned sampling and reporting protocols.)**

A building inspection will only be acceptable if performed **within three years** prior to the demolition or renovation. If an inspection report is more than three years old, then it must be confirmed and verified by a licensed Asbestos Building Inspector or Management Planner.

Friable Asbestos Containing Materials

If friable asbestos-containing materials (e.g., pipe insulation) are present, they must be removed prior to being disturbed during renovation or demolition activities. Removal (abatement) must be performed by trained, licensed persons using procedures detailed in State and Federal regulations.

A project design must be prepared for each asbestos abatement project involving the abatement of greater than 3,000 square feet, 1,500 linear feet and/or 656 cubic feet of RACM in a facility to be reoccupied. Such designs must be prepared by a person licensed by DHEC as an Asbestos Project Designer.

Non-Friable Asbestos Containing Materials

Please note that when it can reasonably be expected that non-friable materials will become friable during removal, that these materials must be considered friable from the beginning. If non-friable Asbestos Containing Materials (ACM) becomes friable during an abatement project, the removal becomes subject to the same requirements as friable materials, including training, licensing, notification, and work practices.

- Material should always be lowered to the ground carefully. Throwing or dropping non-friable ACM to the ground or into a truck will cause the material to become friable.
- Materials should be kept wet or misted with water during removal to minimize potential fiber release. **NOTE: The use of water is only a control measure and by no means prevents a material from becoming friable.**
- Once removed, materials may be placed in 6-mil polyethylene bags or drums or wrapped with 6-mil polyethylene sheeting. Additional water may be added to ensure thorough wetting, but do not add so much that the bag or wrapping breaks when lifted.
- Debris already on the ground should be wet and either collected manually or gathered with a shovel and bagged for disposal. These materials can be potential sources of airborne asbestos fiber releases.
- South Carolina Regulation 61-86.1 requires that containers (bags, drums, wrapped components) holding asbestos waste must be labeled with the following: **DANGER -**

CONTAINS ASBESTOS FIBERS - AVOID CREATING DUST - CANCER AND LUNG DISEASE HAZARD.

- Materials should be taken to a landfill as soon as possible but may be stored temporarily in a secure area subject to Departmental approval. Transport the materials so as to prevent them from leaking, spilling, or blowing off the vehicle.

- You should contact the landfill directly to make sure it will accept the material. You must obtain written approval from DHEC in advance for the disposal. You can get this approval by writing to the following address:

  South Carolina Department of Health and Environmental Control
  Attn: Bureau of Air Quality/Asbestos Section
  2600 Bull Street Columbia, SC 29201

  Be sure to include the following:

  1. the address where the material is to be removed;
  2. a brief description of the content (cement-like tiles, asphaltic shingles, etc.);
  3. the volume of waste in cubic yards or the area in square feet of material removed, and;
  4. the name and location of the landfill which has agreed to accept the waste.

  Please remember to include your name, return address, and phone number.

- **DO NOT BURN OR RECYCLE** any asbestos-containing or asbestos-contaminated materials.

The Occupational Safety and Health Administration (OSHA) has rules for workers affected by asbestos-containing materials. These rules must be complied with by all contractors and facility owners and include specific work practices, respiratory protection, and asbestos training requirements, **even for activities involving only non-friable asbestos-containing materials.** Contact the Department of Labor at (803) 896-7665 for details.

Notification of Renovations & Demolitions

Prior to removing regulated asbestos-containing materials, written notification must be submitted to DHEC (up to 10 working days in advance, depending on the amount of asbestos to be removed). The notification must include certain required items of information about the owner, the contractor, the facility, and the asbestos removal project. Required fees must be submitted along with the notification. You must obtain a permit from the Department prior to the renovation activity.

Prior to the demolition of any regulated facility, written notification must be submitted to DHEC *at least 10 working days* in advance **even if a building inspector determines that asbestos is not present at the facility.** The notification must include certain required items of information about the owner, the contractor, the facility, and the demolition project. Required fees and a copy of the building inspector's report must be submitted along with the notification of demolition. You must obtain a permit from the Department prior to the demolition activity.

Disposal

Never burn any asbestos-containing waste material.

Non-asbestos-containing demolition debris and debris which contains only non-regulated roofing or flooring may be disposed of at a DHEC-approved disposal site for cellulosic or inert waste. Waste consolidation activities involving grinding, cutting, or compacting of non-friable asbestos-containing materials will subject these materials to more stringent State and Federal asbestos disposal regulations.

Regulated asbestos waste must be handled by properly licensed asbestos abatement personnel and disposed of at a landfill permitted to accept regulated asbestos waste. A list of approved landfills may be obtained from the Asbestos Section.

Building Inspection Report Directions

As required by the National Emission Standard for Hazardous Air Pollutants (NESHAP) and Regulation 61-86.1, an owner/operator shall ensure that a building inspection, to detect the presence of asbestos-containing material (ACM), has been performed prior to any renovation or demolition activity at a regulated facility.

Under Regulation 61-86.1, Section VI.A.6., an inspection cannot have been performed more than three years prior to a renovation or demolition activity. If more than three years have elapsed since the most recent inspection, the previous inspection shall be confirmed and verified by a licensed building inspector and/or management planner.

Regulation 61-86.1 requires that all inspections be performed by persons trained and licensed as either a building inspector and/or management planner. In order to be licensed in these disciplines, persons must have successfully completed a DHEC approved initial training course specific to inspecting for ACM in a building and/or a course specific to management planning for ACM in a building. Persons must also have taken and passed an examination at the end of the course with a score of 70 percent or above.

In performing inspections, Regulation 61-86.1 requires that a building inspector and/or management planner comply with the requirements of Section VI, Asbestos Building Inspection Requirements. An inspection shall include samples from suspect friable and non-friable ACM on interior and exterior portions of a facility or its facility components.

In performing inspections, Regulation 61-86.1 requires that a building inspector and/or management planner follow specific sampling procedures. According to Section IV.B.3.a of the regulation, a building inspector and/or management planner shall comply with the procedures specified in **40 CFR 763.86** in determining sampling locations and the number of representative samples to be collected. An inspection shall include samples from suspect friable and non-friable ACM on interior and exterior portions of a facility or its facility components.

Under 40 CFR Part 763.86, suspect ACM are divided into three categories: surfacing materials, thermal system insulation (commonly referred to as TSI), and miscellaneous materials.

Regulation 61-86.1, Section VI contains sampling procedures specific to each category of material.

Surfacing material includes, but is not limited to, joint compound, plaster, and painted, troweled on, or spray-applied textured material. To remain in compliance with Regulation 61-86.1, surfacing materials on exterior and interior portions of a facility shall be sampled according to procedures outlined in Regulation 61-86.1, Section VI.D.1. (a)-(c):

- A licensed asbestos inspector shall collect, in a statistically random manner, a minimum of three bulk samples from each homogeneous area of any surfacing that is not assumed to be ACM, and shall collect the samples as follows:
    - At least three bulk samples shall be collected from each homogeneous area that is 1,000 or fewer square feet (sf) or linear feet (Lf) in size.
    - At least five bulk samples shall be collected from each homogeneous area that is greater than 1,000 but fewer than or equal to 5,000 sf or Lf.
    - At least seven bulk samples shall be collected from each homogeneous area that is greater than 5,000 sf or Lf.

Thermal System Insulation (TSI) is any material that is applied to pipes, fittings, boilers, breeching, tanks, ducts, or other facility components for the purpose of preventing heat loss or gain, water condensation, or for other purposes. ***Miscellaneous Material*** is any material that is not considered a surfacing material or thermal system insulation and includes, but is not limited to, flooring, roofing, mastics, gaskets, cementitious materials, caulkings, ceiling tiles, fire doors, wall boards, and flexible duct connections. To remain in compliance with Regulation 61-86.1, TSI and miscellaneous materials on exterior and interior portions of a facility shall be sampled in accordance with procedures outlined in Regulation 61-86.1, Section VI.D.2:

- A licensed asbestos inspector shall collect, in a statistically random manner, at least three bulk samples from each homogeneous area of TSI and any miscellaneous material that is not assumed to be ACM.
- In accordance with ASTM E2356, and any subsequent amendments and editions, negative results for non-friable organically bound material (NOB) shall be verified with at least one TEM analysis.
- NOBs include flooring, roofing, mastics, adhesives, caulks, and glazing.
- If an accredited inspector has determined the thermal system insulation to be fiberglass, foam glass, rubber, or other non-suspect material, then bulk samples are not required.

Regulation 61-86.1, Section VI.C requires that a building inspector and/or management planner prepare a written asbestos building inspection report to include the following:

- A title page denoting:
    1. The client's name, company, address, and telephone number, and the name and exact location of the facility inspected;
    2. the date the inspection was performed;
    3. the date the inspection report was written; and
    4. the printed name and telephone number of the inspector(s), and his or her affiliated company name, address, and telephone number.

- A cover letter to the building owner or owner's representative that describes the purpose of the inspection; a general synopsis of the inspection and results; and the name, title, and signature of the inspector(s) and report writer, if different.
- A detailed narrative of the physical description of the building or part of the building affected by the renovation or demolition operation that includes:
    1. The square footage of the building or part of the building affected by the renovation or demolition operation;
    2. The building materials used in the construction of the exterior, roof, interior, and basement or crawlspace of the building affected by the demolition or affected by the renovation materials operation;
    3. An estimated or exact quantity (square or linear feet) for all suspect materials whether sampled for or assumed to be asbestos that may be affected by the renovation or demolition operation;
    4. Also include a description of non-suspect materials excluding: glass, metals, kiln brick, cement, fiberglass, concrete, pressed wood, cinder block, and rubber.
- An executive summary that details:
    1. The type of suspect ACM (e.g., TSI, floor tile, mastic), total square or linear footage, and the total number of samples collected for each separate homogenous area affected by the renovation or demolition operation;
    2. The date of the inspection, type, condition, quantity, sample results, and exact location of ACM positively identified or assumed to be ACM in the part of the building affected by the renovation or demolition operation;
    3. A list of the homogeneous areas identified;
    4. Whether the material is accessible for the building or part of the building affected by the renovation or demolition operation; and (5) The material's potential for disturbance for the building or part of the building affected by the renovation or demolition operation.
- For renovation and demolition operations, the inspector's determination that ACM is friable or non-friable.
- Except when suspect ACM materials are assumed to be asbestos, include a complete, clear, legible copy of all laboratory bulk sample results.
- Clear, legible drawings and/or photographs to clarify the scope of the renovation or demolition operation. Illustrate the exact location of each sample collected. For facilities that involve a trade secret or confidential component or an affected area process, a request for a variance may be submitted.
- The printed name and signature of each accredited inspector who collected the samples, and a clear legible copy of his or her DHEC issued asbestos building inspector or management planner license.

Things to Note:

- At no time will negative assumptions about a suspect material's content be acceptable. There are only two acceptable options:
    1. Positive assumptions of suspect materials or
    2. Sampling of suspect materials per the procedures specified in 40 CFR 763.86
- A homogenous area is considered not to contain ACM only if the results of all samples required to be collected from the area are one percent or less.
- Bulk samples shall not be composited for analysis.

- In a multi-unit building, each separate room in each part of the building or areas affected by the renovation or demolition operation shall be inspected to confirm and quantify ACM homogeneous areas for sampling purposes.
- DHEC will not accept an asbestos building inspection or written report for any structure from an employee of an abatement company also involved in the removal of asbestos-containing materials from that structure, unless the licensed inspector is an employee of an entity regulated under Regulation 61-86.1, Section XX, Industrial Manufacturing and Electrical Generation Facilities.
- An asbestos building inspector shall not participate in the analysis of the bulk samples he or she has collected.
- Destructive sampling techniques shall be utilized.
- Material Safety Data Sheets (MSDS), statements from the manufacturer, and architecture signoff will not be accepted as proof that a building product contains no asbestos, except in cases where the owner can verify the direct correlation of the building product to the MSDS, statements from the manufacturer, and/or architecture signoff documents. DHEC reserves the right to reject documentation that it deems unacceptable.

D H E C

PROMOTE PROTECT PROSPER

ASBESTOS ABATEMENT PROJECT LICENSE APPLICATION

BUREAU OF AIR QUALITY • ASBESTOS SECTION • 2600 BULL STREET • COLUMBIA • SC • 29201

TYPE OF OPERATION: ☐ Standard Removal ☐ Emergency Removal ☐ Enclosure ☐ Encapsulation ☐ Cleanup ☐ Disposal

FOR OFFICE USE Postmark/Received:	Original ☐ / Revised ☐ / Cancellation ☐ (check one)	Project License I.D. (For Revisions/Cancellations):

I. FACILITY OWNER: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (_____) _____

II. REMOVAL CONTRACTOR: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (_____) _____

E-MAIL ADDRESS: _____ E-MAIL PERMIT ☐ OR MAIL PERMIT ☐

FEDERAL I.D. NUMBER: _____

DHEC CONTRACTOR LICENSE NO. (If applicable): _____ EXPIRATION DATE: _____

III. FACILITY NAME: _____

STREET ADDRESS: _____

CITY: _____ STATE: _____ COUNTY: _____

SITE (ROOM, FLOOR, WING, UNIT, MACHINE, ETC.): _____

BUILDING SIZE: _____ NO. OF FLOORS: _____ AGE IN YEARS: _____

PRESENT USE: _____ PRIOR USE: _____ FUTURE USE: _____

IV. PROCEDURES, INCLUDING ANALYTICAL METHOD IF APPROPRIATE, USED TO DETECT THE PRESENCE OF ASBESTOS MATERIAL:

FACILITY OR FACILITY COMPONENT SURVEYED BY (INSPECTOR NAME): _____

COMPANY: _____ PHONE: (_____) _____

DHEC LICENSE NUMBER: _____ EXPIRATION DATE: _____

V. PROJECT DESIGN PERFORMED BY (IF APPLICABLE): _____

COMPANY: _____ PHONE: (_____) _____

DHEC LICENSE NUMBER: _____ EXPIRATION DATE: _____

VI. ASBESTOS-CONTAINING MATERIALS (ACM) ***TO BE REMOVED ONLY:***

TYPE (TSI, SURFACING, FLOORING, ROOFING, ETC.)	**AMOUNT** (SQUARE FEET, LINEAR FEET, CUBIC FEET)	**CONDITION** (CIRCLE ONE)
		☐ FRIABLE ☐ NON-FRIABLE
		☐ FRIABLE ☐ NON-FRIABLE
		☐ FRIABLE ☐ NON-FRIABLE
		☐ FRIABLE ☐ NON-FRIABLE

VII. SCHEDULED DATES OF REMOVAL: START DATE: _____ COMPLETION DATE: _____

WORK DAYS: _____ WORK HOURS: _____

APPLICATIONS MUST BE SUBMITTED WITH FEES PRIOR TO THE SCHEDULED START DATE AS FOLLOWS:

NESHAP PROJECTS: 10 WORKING DAYS
SMALL PROJECTS: 4 WORKING DAYS
MINOR PROJECTS: 2 WORKING DAYS

FEE SCHEDULE FOR FRIABLE ASBESTOS-CONTAINING MATERIALS:

10 CENTS PER SQUARE FOOT OR LINEAR FOOT
MINIMUM FEE OF $25.00
MAXIMUM FEE OF $1000.00

Non-Friable (NESAP-sized) Projects: 4 working days. No fee for non-friable ACM.

For additional information concerning regulatory requirements call or visit our Web site at http://www.scdhec.gov/environment/baq/asbestos.aspx

VIII. DESCRIPTION OF PLANNED ABATEMENT WORK & METHOD(S) TO BE USED:

IX. DESCRIPTION OF WORK PRACTICES & ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS OF ASBESTOS AT THE RENOVATION SITE:

X. WASTE TRANSPORTER #1: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (_____)_____

WASTE TRANSPORTER #2: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON:_____ PHONE: (_____)_____

XI. WASTE DISPOSAL SITE: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (_____)_____

TEMPORARY ASBESTOS STORAGE CONTAINMENT AREA LICENSE NUMBER (IF APPLICABLE): _____

XII. DESCRIPTION OF EMERGENCY REMOVAL (**PLEASE ATTACH A LETTER FROM THE FACILITY OWNER EXPLAINING THE NATURE OF THE EMERGENCY**)

DATE & HOUR OF EMERGENCY (MM/DD/YY): _____

DESCRIPTION OF SUDDEN, UNEXPECTED EVENT:

EXPLANATION OF HOW THE EVENT CAUSED UNSAFE CONDITIONS AND/OR WOULD CAUSE EQUIPMENT DAMAGE AND/OR AN UNREASONABLE FINANCIAL BURDEN:

XIII. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NON-FRIABLE ASBESTOS MATERIAL BECOMES CRUMBLED, PULVERIZED OR REDUCED TO POWDER:

XIV. *I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF REGULATION (40 CFR PART 61, SUBPART M) WILL BE ON-SITE DURING THE RENOVATION AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE FOR INSPECTION DURING NORMAL BUSINESS HOURS.*

_____/_____

(SIGNATURE OF OWNER/OPERATOR) (DATE)

XIV. *I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT.*

_____/_____

(SIGNATURE OF OWNER/OPERATOR) (DATE)

D H E C

PROMOTE PROTECT PROSPER

DEMOLITION LICENSE APPLICATION

BUREAU OF AIR QUALITY • ASBESTOS SECTION • 2600 BULL STREET • COLUMBIA • SC • 29201

TYPE OF OPERATION: ☐ Total Demolition ☐ Partial Demolition ☐ Ordered Demolition

FOR OFFICE USE Postmark/Received:	Original/Revised/Cancellation (circle one) ☐ ☐	Project License I.D. (For Revisions/Cancellations):

I. FACILITY OWNER: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (_____) _____

II. IS ASBESTOS PRESENT IN THE FACILITY?: YES ☐ / NO ☐ (check one)

III. DEMOLITION CONTRACTOR: _____ FEDERAL ID NO.: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (_____) _____

E-MAIL ADDRESS: _____ E-MAIL PERMIT ☐ OR MAIL PERMIT ☐

FEDERAL I.D. NUMBER: _____

ASBESTOS REMOVAL CONTRACTOR (If applicable): _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (_____) _____

IV. FACILITY NAME: _____

STREET ADDRESS: _____

CITY: _____ STATE: _____ COUNTY: _____

SITE (ROOM, FLOOR, WING, UNIT, MACHINE, ETC.): _____

BUILDING SIZE: _____ NO. OF FLOORS: _____ AGE IN YEARS: _____

PRESENT USE: _____ PRIOR USE: _____ FUTURE USE: _____

V. PROCEDURES, INCLUDING ANALYTICAL METHOD IF APPROPRIATE, USED TO DETECT THE PRESENCE OF ASBESTOS MATERIAL:

FACILITY OR FACILITY COMPONENT SURVEYED BY (INSPECTOR NAME): _____

COMPANY: _____ PHONE: (_____) _____

DHEC LICENSE NUMBER: _____ EXPIRATION DATE: _____

VI. NON-FRIABLE MASTIC, GLUE, AND ADHESIVE ASBESTOS-CONTAINING MATERIALS ***REMAINING IN PLACE DURING DEMOLITION*** *(IF APPLICABLE):*

TYPE (MASTIC, GLUE, AND ADHESIVE)	**AMOUNT** (SQUARE FEET)

VII. SCHEDULED DATES OF DEMOLITION (YOU MUST SPECIFY DATES):

START DATE: _____ COMPLETION DATE: _____

WORK DAYS: _____ WORK HOURS: _____

- ***Applications must be mailed along with a $50.00 fee (payable to SCDHEC) at least 10 working days prior to the scheduled start date. Faxes will not be accepted.***
- ***A copy of an asbestos survey report (no older than 3 years) must accompany the application.***

For additional information concerning regulatory requirements call or visit our Web site at http://www.scdhec.gov/environment/baq/asbestos.aspx

VIII. DESCRIPTION OF PLANNED DEMOLITION METHOD(S) TO BE USED:

☐ BULLDOZER	☐ LOADER	☐ WRECKING BALL	☐ MANUAL	☐ BURNING	☐ IMPLOSION/EXPLOSION

IF OTHER PLEASE DESCRIBE:

IX. DESCRIPTION OF WORK PRACTICES & ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS OF ASBESTOS AT THE DEMOLITION SITE:

X. WASTE TRANSPORTER #1: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: ( ) _____

WASTE TRANSPORTER #2: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: ( ) _____

XI. WASTE DISPOSAL SITE: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: ( ) _____

XII. IF DEMOLITION ORDERED BY GOVERNMENT AGENCY, PLEASE IDENTIFY THE AGENCY BELOW: (PLEASE ATTACH A COPY OF THE ORDER)

NAME: _____ TITLE: _____

AUTHORITY: _____

DATE OF ORDER (MM/DD/YY): _____ DATE ORDERED TO BEGIN(MM/DD/YY): _____

XIII. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NONFRIABLE ASBESTOS MATERIAL BECOMES CRUMBLED, PULVERIZED, OR REDUCED TO POWDER:

XIV. *I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF REGULATION (40 CFR PART 61, SUBPART M) WILL BE ON-SITE DURING THE DEMOLITION INVOLVING RACM AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE FOR INSPECTION DURING NORMAL BUSINESS HOURS.*

_____/_____
(SIGNATURE OF OWNER/OPERATOR) (DATE)

XV. *I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT.*

_____/_____
(SIGNATURE OF OWNER/OPERATOR) (DATE)

- ***Applications must be mailed along with a $50.00 fee (payable to SCDHEC) at least 10 working days prior to the scheduled start date. Faxes will not be accepted.***
- ***A copy of an asbestos survey report (no older than 3 years) must accompany the application.***

For additional information concerning regulatory requirements call or visit our Web site at http://www.scdhec.gov/environment/baq/asbestos.aspx

D H E C
PROMOTE PROTECT PROSPER

Asbestos Waste Shipment Record

1. **SCDHEC ASBESTOS ABATEMENT PROJECT LICENSE:**

Generator Information

2. Waste Generator/Owner Name & Address:	Work Site Name & Physical Address:	Waste Generator/Owner Telephone Number ( )
3. Abatement Contractor Name & Address:		Abatement Contractor Telephone Number ( )
4. Name of waste disposal site (WDS), mailing address, and physical site location:		WDS Telephone Number: ( )

5. Description of Waste Materials (please circle): Friable (Regulated) / Nonfriable (Nonregulated)	6. Bags of Containers: No. Type _____ Drums _____ Bags _____ Bulk Load	7. Total Quantity: m3 (yd3)

8. Special handling instructions & additional information:

9. Generator's/Contractor's Certification: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled. The contents are in all respects in proper condition for transport by highway according to applicable international and government regulations.

Print Name:	Signature:	Date:

Transporter Information (Acknowledgment of Receipt of Materials):

10. Name, title, address, telephone number:	Signature:	Date:
11. Name, title, address, telephone number:	Signature:	Date:

Disposal Site Operator

12. Discrepancy: Bags or Containers Total Quantity

13. Waste Disposal Site Owner or Operator certification of receipt of asbestos materials covered by this manifest except as noted in item 11.

Print Name:	Signature:	Date:

Please forward a completed copy of this record to: SCDHEC, Bureau of Air Quality, Asbestos Section, 2600 Bull Street, Columbia, SC 29201
(803) 898-4389 office. (803) 898-4281 fax.