

HVAC Equipment Replacement and Repairs  
USC Humanities Office Building  
University of South Carolina  
H27-Z417 / 50003395-2

Addendum Number One

October 9, 2020

From: Bill Livingston, P.E.  
Swygert & Associates, Ltd

To All Bidders:

The following items add to, modify, clarify or otherwise alter the Drawings and/ or specifications and will be a part of the Contract Documents. Where a portion of the Drawings and/or specification is added to, modified or otherwise altered, the portion not so affected shall remain. Bidder shall include all effects that these items may have on this proposal.

Acknowledge receipt of this Addendum in the space provided in the Bid Form. Failure to do so may subject Bidder to disqualification.

Clarifications

- | <u>Item No.</u> | <u>Description</u>   |
|-----------------|--|
| 1.              | <u>Clarification:</u> If additional site visits are requested, please contact Pete Fisher at (803) 960-7372.   |
| 2.              | <u>Clarification:</u> Note that the plans indicate new shutoff valves and valve packages at each VAV. These can be provided either with the VAV box from the factory or field fabricated.  |
| 3.              | <u>Clarification:</u> New thermostats shall be coordinated with USC, since USC will provide new anchoring holes due to asbestos in the gypsum board.   |
| 4.              | <u>Clarification:</u> Asbestos abatement will be performed by a separate contractor and not included in the contractor's bid for this project.   |
| 5.              | <u>Clarification:</u> Asbestos Survey is included for review.  |
| 6.              | <u>Clarification:</u> Existing VAV terminals and ductwork on either side of the VAV will be removed by the separate demolition contractor. HVAC contractor to indicate extents of demolition prior to demolition contractor proceeding.                                |
| 7.              | <u>Clarification:</u> Existing VAV terminals with no insulation will still be removed by the separate demolition contractor.   |
| 8.              | <u>Clarification:</u> Furniture will be moved by USC.  |
| 9.              | <u>Clarification:</u> This contractor will remove existing tiles and ceiling grid as required to perform the work. Existing tiles removed will be stored and reinstalled by this contractor. Tiles or grid damaged will be replaced by this contractor. New tiles will |

HVAC Equipment Replacement and Repairs  
USC Humanities Office Building  
University of South Carolina  
H27-Z417 / 50003395-2

be installed completely in a room of the contractor's choosing, new tiles will not be installed next to old tiles.

10. Clarification: Where no existing tiles are present or existing ceiling grid is damaged, this will be provided by USC. Contractor shall record and document on the drawings where this occurs prior to the start of construction.
11. Clarification: The work shall proceed as one phase at the same time. Standard working hours are acceptable. Building is vacated during construction.
12. Clarification: Insulation is only replaced on ductwork at new VAV boxes where VAV boxes and insulation was removed during demolition. Existing ducts that are not insulated are indicated on the drawings and not to be included in the contractor's bid.
13. Clarification: Pro-Press copper fittings are acceptable.
14. Clarification: Parking will be provided at the East Energy Plant parking lot.
15. Clarification: Materials can be stored inside the building during construction.
16. Clarification: The contractor will be responsible for protecting the flooring during construction.

END OF ADDENDUM

Attachments:

Pre-Bid Meeting Attendee Sign In Sheet  
Asbestos Survey Report

**University of South Carolina(UofSC)  
Pre Bid Attendee List  
Columbia, SC**

**Project Name:** UofSC Humanities Office  
**Project Number:** Building HVAC Replacement and  
 Repairs  
**Pre Bid Date & Time:** H27-Z417/50003395-2  
 October 7, 2020-Pre Bid Conf 11AM; Site Visit 11:30AM

<b>SWMBE Contractor?</b>	<b>Name</b>	<b>Company Name</b>	<b>Address</b>	<b>Phone #</b>	<b>Email</b>
S W M B E	Seth Stanton	Cullum Services, Inc.			<a href="mailto:stantons@culluminc.com">stantons@culluminc.com</a>
S W M B E	Theresa Doster	McCarter Mechanical			<a href="mailto:theresa@mccartermechanical.com">theresa@mccartermechanical.com</a>
S W M B E	Carlos Sandoval	Cayce Company			<a href="mailto:carlos@caycecompany.com">carlos@caycecompany.com</a>
S W M B E	Kim Yarbrough	Comfort Systems USA Southeast			<a href="mailto:kim.yarbrough@csusasoutheast.com">kim.yarbrough@csusasoutheast.com</a>
S W M B E	Todd Smith	Comfort Systems USA Southeast			<a href="mailto:todd.smith@csusasoutheast.com">todd.smith@csusasoutheast.com</a>
S W M B E	Jared Thrift	Walker-White			<a href="mailto:estimating@walker-white.com">estimating@walker-white.com</a>
S W M B E	Roger Gossett	McCarter Mechanical			<a href="mailto:theresa@mccartermechanical.com">theresa@mccartermechanical.com</a>
S W M B E	Robert Clark	Complete Solutions Contracting			<a href="mailto:office@CSCMidlands.com">office@CSCMidlands.com</a>
S W M B E	John Moring	UofSC College of Arts & Sciences			<a href="mailto:moringj@mailbox.sc.edu">moringj@mailbox.sc.edu</a>
S W M B E	Ty Russell	UofSC Environmental Health & Safety			<a href="mailto:NTRusse@fmc.sc.edu">NTRusse@fmc.sc.edu</a>
S W M B E	Pete Fisher	UofSC Facilities, Planning, Design, & Construction			<a href="mailto:pfisher@email.sc.edu">pfisher@email.sc.edu</a>
S W M B E	Bill Livingston	Swygert & Associates, Ltd.			<a href="mailto:bill@swygert-associates.com">bill@swygert-associates.com</a>
S W M B E	Aimee Rish	UofSC Facilities Procurement			<a href="mailto:arish@fmc.sc.edu">arish@fmc.sc.edu</a>

## ASBESTOS CONTAINING MATERIAL INVESTIGATION REPORT

USC – WELSH HUMANITIES OFFICE BLDG.  
4<sup>TH</sup> – 9<sup>TH</sup> FLOORS MECHANICAL AND WATERPROOFING RENOVATIONS  
1620 COLLEGE STREET  
COLUMBIA, SOUTH CAROLINA

### PREPARED FOR:



UNIVERSITY OF  
**SOUTH CAROLINA**

Mr. Pete Fisher, Project Manager  
University of South Carolina  
1300 Pickens Street  
Columbia, SC 29208

### PREPARED BY:

F&ME Consultants  
1825 Blanding Street  
Columbia, South Carolina 29201

October 5, 2020

F&ME Project No.: E6200.280

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Appendix G – Summary of Inspection

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Appendix I – Laboratory Analysis Reports

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Appendix K – Personnel Certifications

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## 1. EXECUTIVE SUMMARY

This executive summary is intended as an overview for the convenience of the reader. This report should be reviewed in its entirety prior to making any decisions regarding this project.

F&ME Consultants Inc. (FME) has completed an Asbestos Containing Material (ACM) Investigation in advance of the planned mechanical system upgrades to the fourth (4<sup>th</sup>) through ninth (9<sup>th</sup>) floors of the Welsh Humanities Office Building located at 1620 College Street (Building), Columbia South Carolina at the request of the University of South Carolina (USC) (Client). The investigation was requested as a component of planned renovations to replace the existing mechanical fan coil units on the 4<sup>th</sup> through 9th floors and to make the exterior windows of the Building more energy efficient. The investigation was conducted in accordance with South Carolina Department of Health and Environmental Control (SCDHEC), United States Environmental Protection Agency (USEPA), National Emission Standards for Hazardous Air Pollutants (NESHAP), and Occupational Safety and Health Administration (OSHA) regulations requiring an ACM investigation prior to any demolition and/or renovation activities.

Per an agreed upon scope of work, FME performed this Investigation to identify ACM that may be encountered during planned mechanical upgrades and improvements to the exterior windows, and to make recommendations regarding proper handling and disposal of any ACM found. The scope of work included complete investigation above and including the suspended ceilings and exterior windows. The field investigation was performed on September 25, 2020.

The ACM investigation uncovered multiple suspect materials associated with the space above the suspended ceilings that may be impacted by the planned renovations. Of the suspect materials sampled and analyzed, laboratory results found that the following suspect materials were found to be positive for asbestos content:

- **Joint Compound Associated with Drywall Wall Systems**
- **Black Mastic on non-ACM Fiberglass Duct Wrap**
- **Black Mastic on non-ACM Fiberglass Pipe Wrap**
- **Brown/Red Mastic on Metal Duct under non-ACM Fiberglass Wrap**



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

Sincerely,  
F&ME CONSULTANTS



**Tim Ross**  
Environmental Professional  
SCDHEC License No: BI-01637  
Expiration Date 01/26/2021



**Glynn M. Ellen**  
Environmental Department Manager  
Asbestos Consultant/ Management Planner  
SCDHEC License No: MP-20979  
Expiration Date 1/26/2021



## 2. INTRODUCTION

It is FME's understanding that the objective of this ACM investigation was to provide the Client with information regarding the presence and locations of ACM that will be impacted by the planned mechanical renovations and improvements to the exterior windows on the fourth (4<sup>th</sup>) through ninth (9<sup>th</sup>) floors of the Welsh Humanities Office Building. The investigation was focused on the mechanical systems and building materials that would be impacted by the planned mechanical upgrades to replace the existing mechanical fan coil units only. In addition, the exterior windows were sampled to ensure that the planned exterior energy efficient improvements would not impact any ACM.

Therefore, the scope of this Investigation was to identify ACM that may be encountered within the limits of the investigation, and to make recommendations regarding proper handling and disposal of any ACM found. The scope of work included an investigation of the mechanical systems above the suspended ceilings on the 4<sup>th</sup> through 9<sup>th</sup> floors of the Building and sampling the exterior window caulking. No other areas within the building were included in the investigation. The field investigation was performed on September 25, 2020.

The results, conclusions and recommendations from this investigation are representative of the conditions observed at the site on the dates of the field investigation. FME does not assume responsibility for any changes in conditions or circumstances that occur after the investigation. This report has been prepared exclusively for USC and shall not be disseminated in whole or part to other parties without prior consent from USC or FME. No other environmental issues were addressed as part of this report.

## 3. EXISTING BUILDING STRUCTURE

The J. Welsh Humanities Office Building is an approximate 65,000 square foot, ten story concrete and steel structure located at 1620 College Street in Columbia SC. The Building is constructed with concrete, steel structural columns and framing, with exterior exposed aggregate, pre-cast concrete tilt-up panels on the exterior of the Building.

The interior finishes included a combination of drywall, masonry and plaster walls and ceilings with various floor finishes over concrete throughout, and various fiberglass insulated mechanical systems piping, heat exchangers and



*Photo 1 – J. Welsh Humanities Office Building, Columbia, SC*





air handler units. See Appendix A – Site Vicinity Map, for the location of the structure. See Appendix B –General Building Plans, for the general layout of the building.

## 4. FIELD ASSESSMENT

The purpose of this investigation was to locate, sample, and record the physical characteristics of suspect ACM identified associated with the mechanical systems located above the suspended ceilings that are to be impacted by the planned mechanical renovations as well as exterior windows on the 4<sup>th</sup> through 9<sup>th</sup> floors. During the field assessment, building components were visually inspected for suspect ACM. Once reviewed, the quantities and physical condition of suspect materials were assessed, and bulk samples of these materials were submitted for laboratory analysis.

### 4.1 Suspect Materials

The purpose of this investigation was to locate, sample and record the physical characteristics of suspect ACM within the limits of the investigation. Therefore, the quantities and physical condition of suspect materials were assessed, and bulk samples of these materials were submitted for laboratory analysis. The following suspect materials were identified and sampled during this ACM Investigation:

- Joint Compound associated with drywall above the ceiling tiles
- Black Mastic on non-ACM fiberglass wrap insulation over metal HVAC ductwork
- Black Mastic on non-ACM fiberglass wrap insulation over metal plumbing lines
- 2' by 2' Suspended ceiling tiles
- Exterior Window Caulk
- Brown/Red Mastic on metal duct under non-ACM fiberglass wrap insulation

Random samples of the suspect materials were collected for laboratory analysis, and their physical characteristics were recorded. Building materials such as concrete, metal, wood, brick, carpet, etc., were not considered suspect ACM. 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.

See Appendix E – Summary of Samples, for complete list of all samples taken. See Appendix L–SCDHEC Regulation Summary. Proper sampling and chain-of-custody protocols were followed to ensure appropriate handling and delivery of samples to the analytical laboratory. Refer to Appendix K –Personnel Certifications, for SCDHEC qualifications of



Investigation personnel, and Appendix J– Chain of Custody Form, for documentation of proper handling and delivery of samples.

## 5. ASSESSMENT RESULTS

A total of eighteen (18) bulk samples were collected from the planned renovation areas during this investigation. A “*first positive stop*” protocol was implemented for this sampling. This protocol establishes that if the first sample of a suspect material tests positive for asbestos content, subsequent samples will not to be analyzed, and would be considered positive as well.

Due to multiple layering of some suspect materials sampled, and the implementation of a “*first positive stop*” protocol, a total of fifteen (15) bulk samples were analyzed by PLM and one (1) material was TEM-confirmed. Of the suspect materials sampled and analyzed, laboratory results determined that the following suspect materials were found to be positive for asbestos content

- Joint Compound associated with drywall walls
- Black Mastic on non-ACM fiberglass duct wrap insulation
- Black Mastic on non-ACM fiberglass pipe wrap insulation
- Brown/Red Mastic on metal duct under non-ACM fiberglass wrap insulation

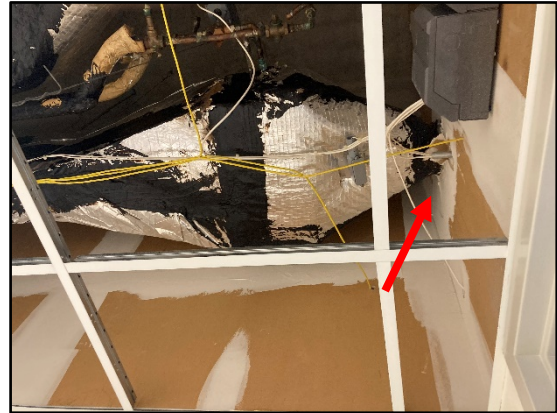
During this investigation, appropriate sampling and chain-of-custody protocols were followed to ensure proper handling and delivery of samples to the analytical laboratory. Appendix I – Bulk Asbestos Analytical Report and Appendix J – Laboratory Chain of Custody are provided to show laboratory documentation of the analytical results. Appendix K – Personnel Certifications, provides the qualifications for the FME Asbestos Inspectors.

### 5.1 Homogeneous Area Locations Where ACM Was Identified

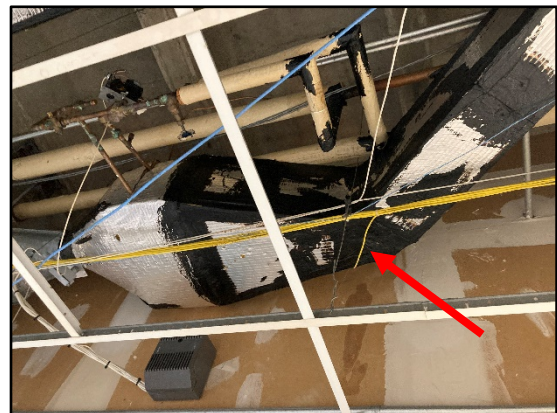
The following are photographs, descriptions, and approximate quantities of the ACM identified to be positive during the Investigation. Guidance is also provided for the proper handling and disposition if the materials in these areas are to be removed. See Appendix D – Homogeneous Area Plan, for homogeneous sampling areas for the various ACM identified below.



**HA-1 – Joint Compound associated with drywall above suspended ceilings (>5,000 SF)** - Asbestos-containing joint compound associated with drywall wall and ceiling systems was noted throughout the Building. It was also noted above the suspended ceilings and interacting with the mechanical fan coil units in to be impacted by the planned renovations. This material was found in an intact non-friable condition, with no damage noted. However, this material will be rendered friable during the abatement process and therefore must be removed under full containment means and methods. If the planned renovations are to impact this material, it must be removed, handled, and disposed of by a licensed abatement contractor prior to the start of renovation activities.



**HA-2 – Black Mastic on non-ACM fiberglass insulation over metal HVAC ductwork (~1,000 SF)** - Asbestos containing black mastic was found on non-ACM fiberglass duct wrap above the suspended ceilings throughout the areas to be impacted by the planned renovations. This material appears intact, and in a non-friable condition with no damage noted. If the planned renovations are to impact this material, it must be removed, handled, and disposed of as ACM by a licensed abatement contractor prior to the start of renovation activities.



**HA-3 – Black Mastic on non-ACM fiberglass pipe wrap insulation (~200 SF)** - Asbestos containing black mastic was found on non-ACM pipe wrap insulation above the suspended ceilings throughout the areas to be impacted by the planned renovations. This material was noted to be in an intact, and in a non-friable condition with no damage being noted. If the planned renovations are to impact this material, it must be removed, handled, and disposed of as ACM by a licensed abatement contractor prior to the start of renovation activities.



**HA-4 – Brown/Red mastic on metal ducts (~500 SF)** Asbestos containing black mastic was found above the suspended ceilings on the seams metal HVAC duct underneath non-ACM fiberglass duct wrap insulation. This material was found to be intact, and in a non-friable condition with no damage being noted. If the planned renovations are to impact this material, it must be removed, handled, and disposed of as ACM by a licensed abatement contractor prior to the start of renovation activities.



## 6. RECOMMENDATIONS

The results, conclusions, and recommendations of this Investigation are representative of the conditions observed at the site on the date of the field investigation. FME does not assume responsibility for any changes in conditions or circumstances that may have occurred after this investigation.

It is our understanding that the planned renovation will involve the replacement of existing mechanical fan coil units and energy efficiency improvements to the exterior windows of the Building. This renovation has the potential to impact the asbestos containing materials identified during this investigation. If the planned renovation will impact these materials, they must be abated by a licensed abatement contractor prior to the start of renovation activities. In addition, hidden suspect materials may be encountered during the renovation activities. SCDHEC must be notified in the event any additional ACM is discovered, as well as changes in the condition of identified ACM.



A recent flooding occurred in the Building in July of 2020 due to a rupture in a mechanical line. After the flooding occurred, water damaged ACM drywall was abated in large areas of the Building. However, the unpainted drywall walls found above the suspended ceiling grid remained in place and are original to the Building's construction in the late 1960's and was not part of the flood abatement. Since the flood abatement and the installation of new drywall on various walls throughout the Building, distinguishing the newer non-ACM drywall from the original ACM drywall will be difficult. Therefore, for the purposes of this report, all drywall wall systems throughout the Building are considered ACM. In several of the areas, the mechanical fan coils penetrate these original ACM drywall systems. The quantity of drywall estimated for this report is a quantification of total drywall above the ceilings, not the quantity that will need to be abated as a component of the planned renovations.

If any concealed and/or inaccessible ACM are encountered during abatement and/ or demolition activities, the affected contractor(s) must stop work, take appropriate actions, and notify the Owner or the Owner's Environmental consultant for an appropriate response action. SCDHEC must be notified in the event any additional ACM is discovered, as well as changes in the condition of identified ACM. Appendix N – Abatement Project Forms, are provided for more information. See Appendix G – Summary of Inspection and Appendix H –Physical Assessment Data Sheets, for description and condition of ACM materials.

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

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 feet, 1,500 linear feet, 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.

We sincerely appreciate the opportunity to be of service to the University of South Carolina in this matter. If you have any questions regarding the information presented herein, please contact our office at (803) 254-4540.



## APPENDICES

Appendix A – Site Vicinity Map

Appendix B – General Building Plans

Appendix C – Sample Location Plans

Appendix D – Homogeneous Area Plans

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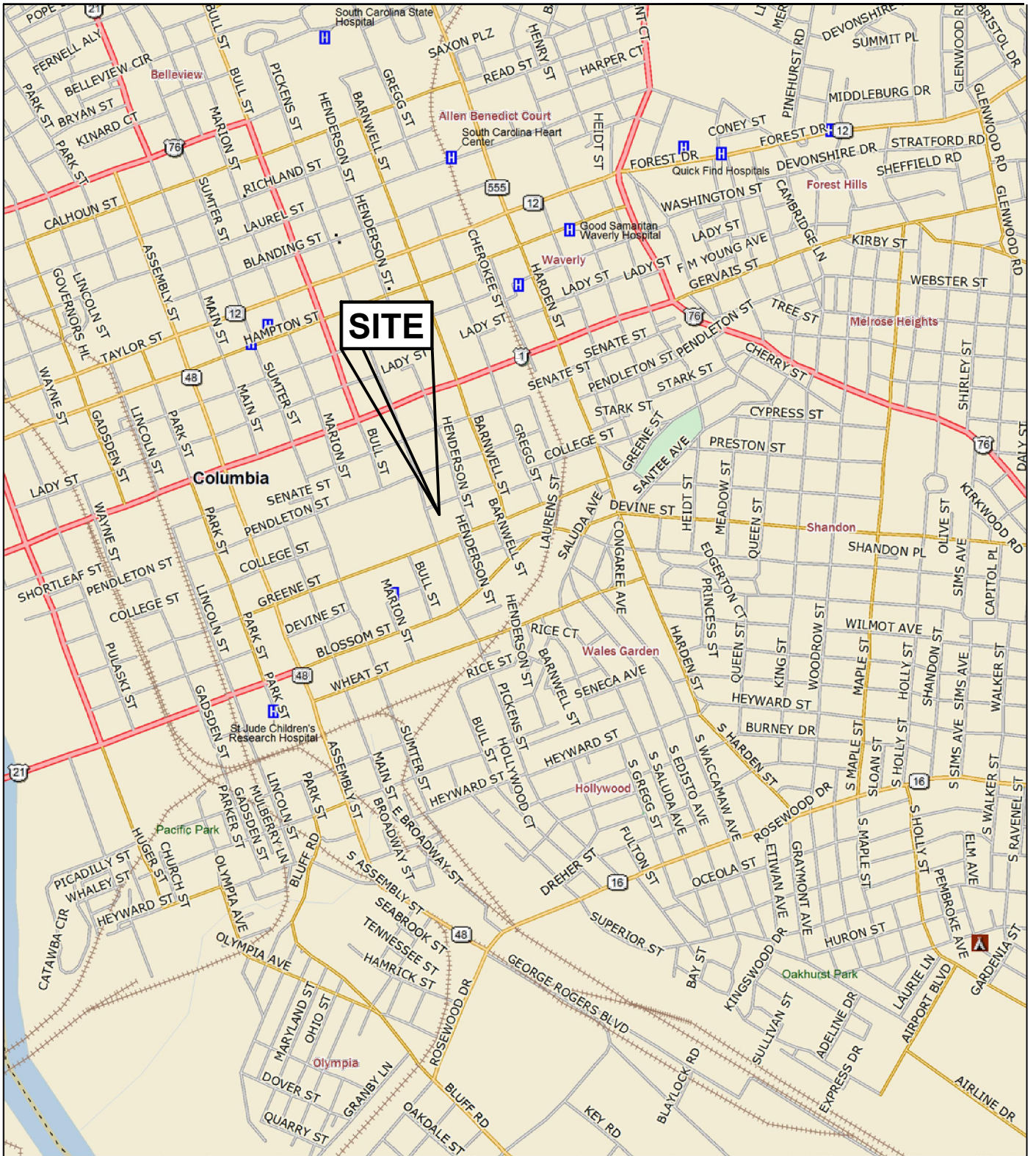
Appendix L – Regulatory Summary

Appendix M – Abatement Project Forms



Appendix A  
Site Vicinity Map

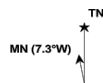




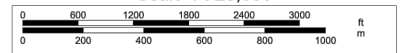
Data use subject to license.

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Scale 1 : 25,000



1" = 2,083.3 ft

Data Zoom 13-0

FIGURE NUMBER:

1

F&ME CONSULTANTS PROJECT NUMBER:

E6200.280

Asbestos Containing Materials Investigation  
Welsh Humanities Office Building  
1620 College Street, Columbia, SC 29208  
Appendix A - Site Vicinity Map

Prepared for:  
University of South Carolina  
1300 Pickens Street  
Columbia, SC 29201



1825 BLANDING STREET  
COLUMBIA, SC 29201

ORIGINAL:  
September 28, 2020

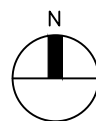
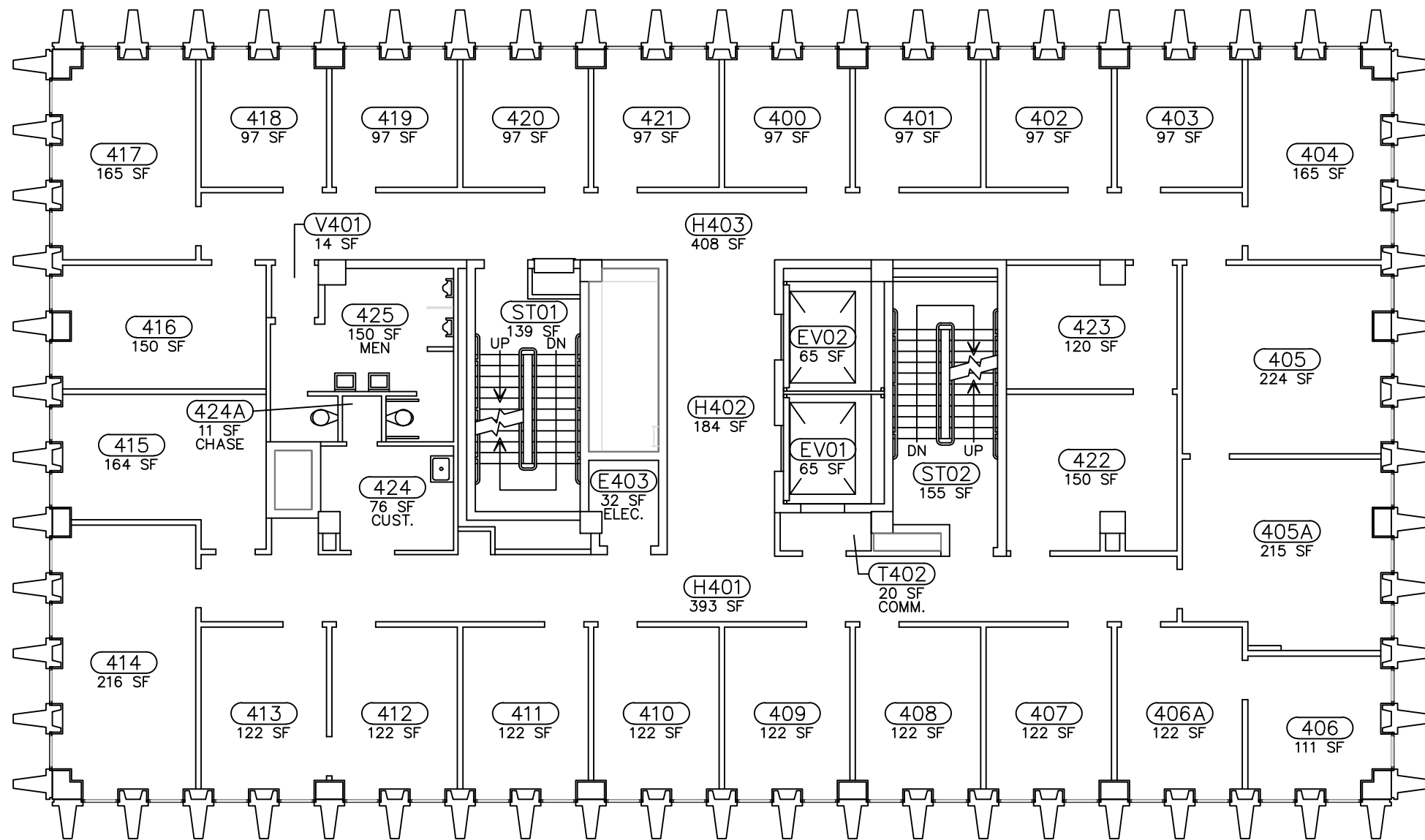
REVISIONS:  
1 \_\_\_\_\_  
2 \_\_\_\_\_  
3 \_\_\_\_\_

SCALE  
As Shown

DRWN. BY: MSM  
CHKD. BY: TOR  
APPR. BY: GME

NOTES:

Appendix B  
General Building Plans



1  
A6

FOURTH FLOOR PLAN - 054

SCALE: 3/32" = 1'-0"

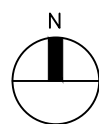
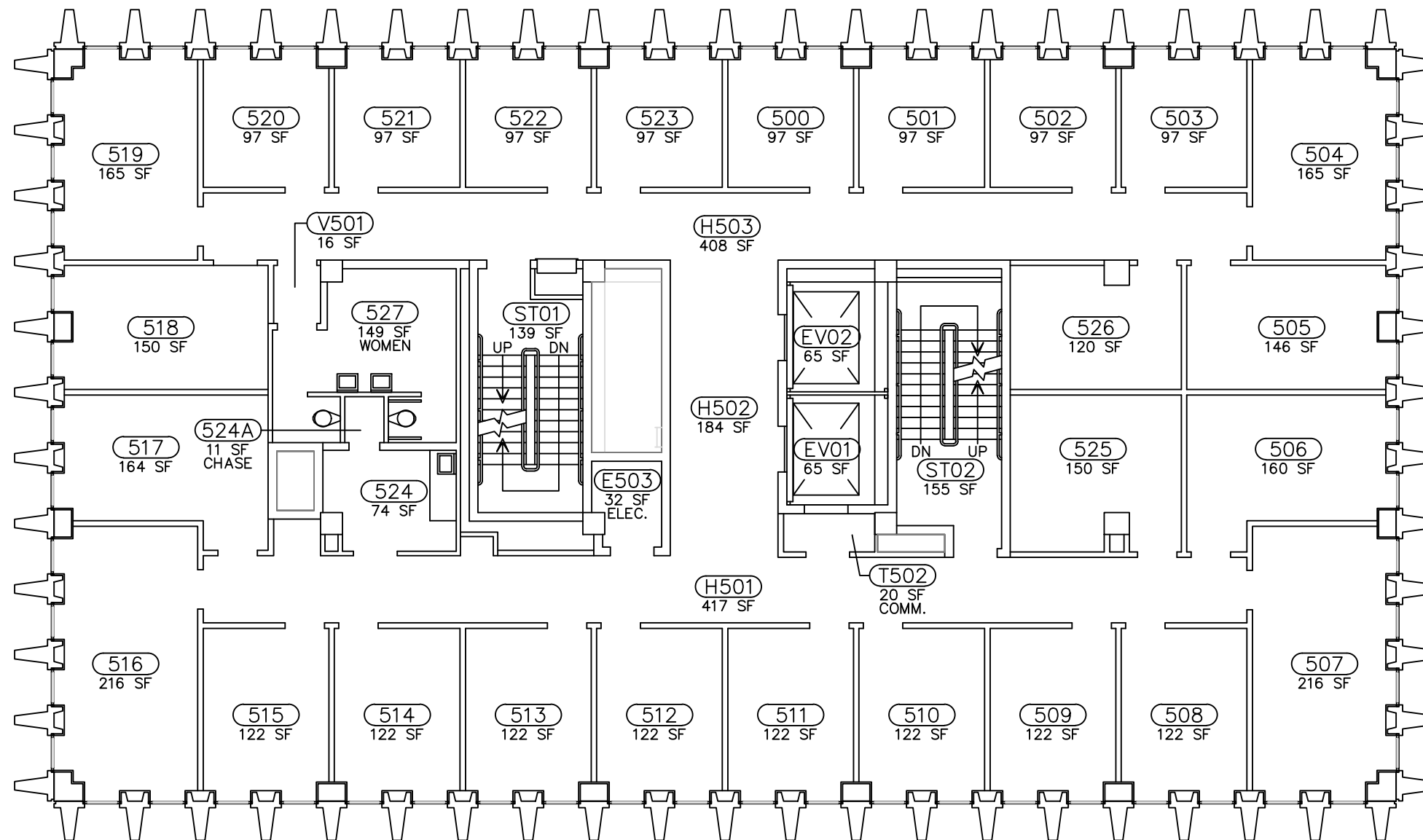
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ORIGINAL: September 28, 2020	REVISIONS:	1	2
		3	
			SCALE 3/32" = 1'

**F&M CONSULTANTS**  
 GEOTECHNICAL - ENVIRONMENTAL - MATERIALS  
 1825 BLANDING STREET  
 COLUMBIA, SC 29201

ASBESTOS CONTAINING MATERIALS INVESTIGATION  
 WELSH HUMANITIES OFFICE BUILDING  
 1620 College Street, Columbia, SC 29208  
 General Building Plan  
 Prepared for:  
 University of South Carolina  
 1300 Pickens Street  
 Columbia, SC 29208

F&M CONSULTANTS  
 PROJECT NUMBER:  
 E6200.280

FIGURE NUMBER:  
 2



1  
A7

FIFTH FLOOR PLAN - 054

SCALE: 3/32" = 1'-0"

DRWN BY: MSM
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APPR BY: GME
NOTES:

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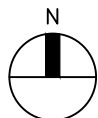
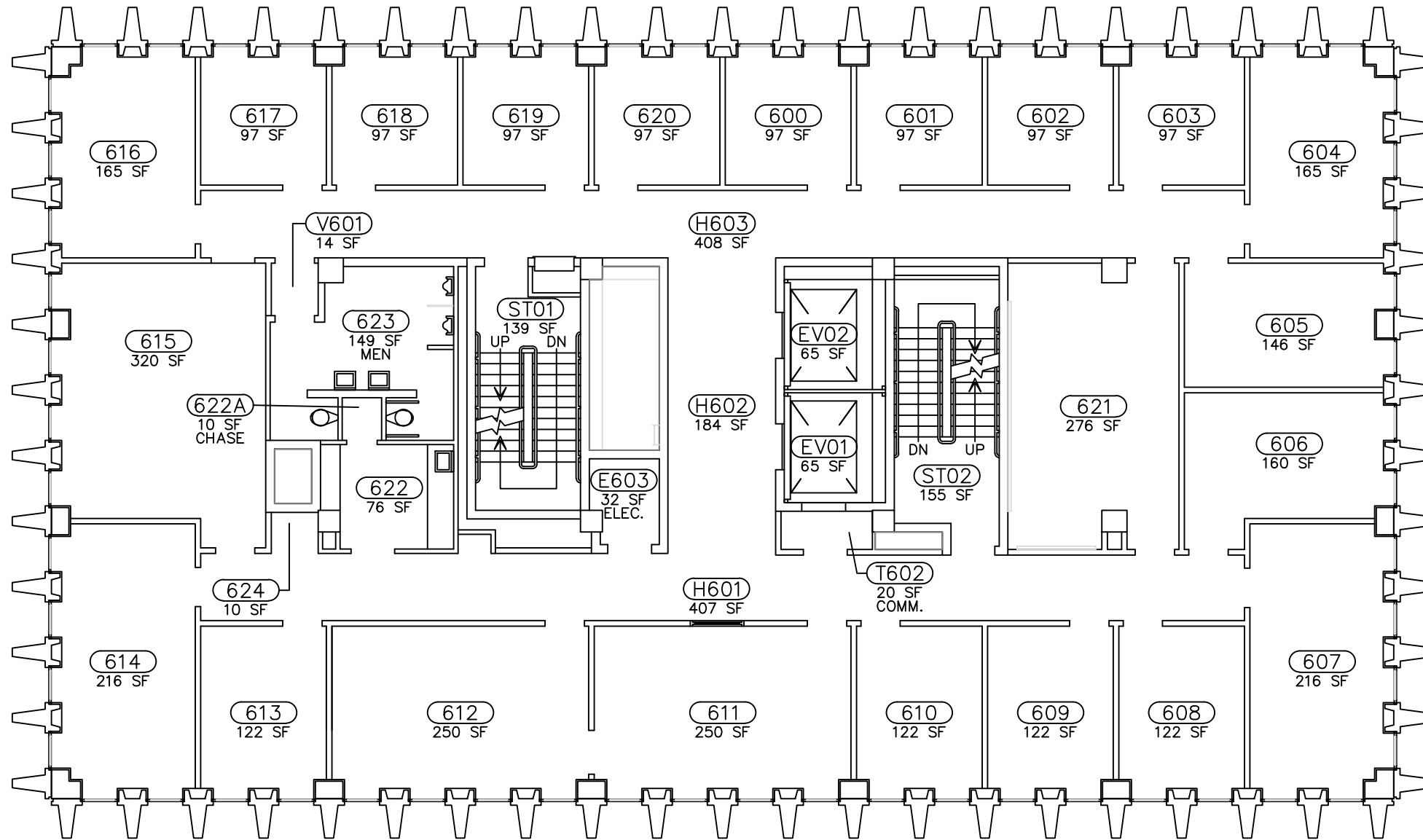
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 COLUMBIA, SC 29201

ASBESTOS CONTAINING MATERIALS INVESTIGATION  
 WELSH HUMANITIES OFFICE BUILDING  
 1620 College Street, Columbia, SC 29208  
 General Building Plan  
 Prepared for:  
 University of South Carolina  
 1300 Pickens Street  
 Columbia, SC 29208

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 PROJECT NUMBER:  
 E6200.280

FIGURE NUMBER:  
 3





1  
A8

SIXTH FLOOR PLAN - 054

SCALE: 3/32" = 1'-0"

DRWN BY: MSM
CHKD BY: TOR
APPR BY: GME
NOTES:

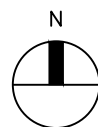
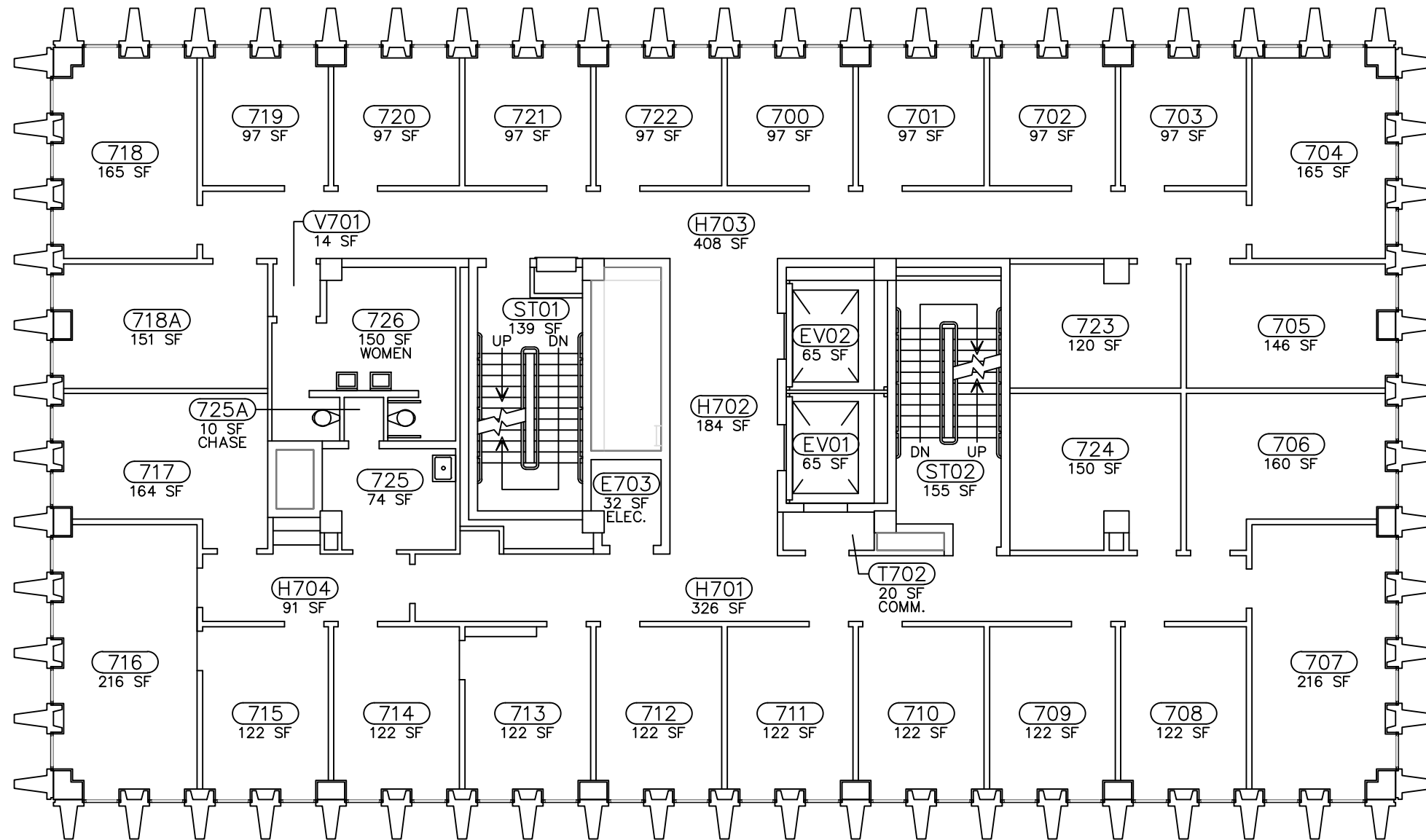
ORIGINAL:	September 28, 2020
REVISIONS:	
1	
2	
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SCALE 3/32" = 1'	

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 COLUMBIA, SC 29201

ASBESTOS CONTAINING MATERIALS INVESTIGATION  
 WELSH HUMANITIES OFFICE BUILDING  
 1620 College Street, Columbia, SC 29208  
 General Building Plan  
 Prepared for:  
 University of South Carolina  
 1300 Pickens Street  
 Columbia, SC 29208

F&ME CONSULTANTS  
 PROJECT NUMBER:  
 E6200.280

FIGURE NUMBER:  
 4



1  
A9

SEVENTH FLOOR PLAN - 054

SCALE: 3/32" = 1'-0"

DRWN BY: MSM
CHKD BY: TOR
APPR BY: GME
NOTES:

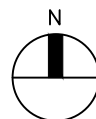
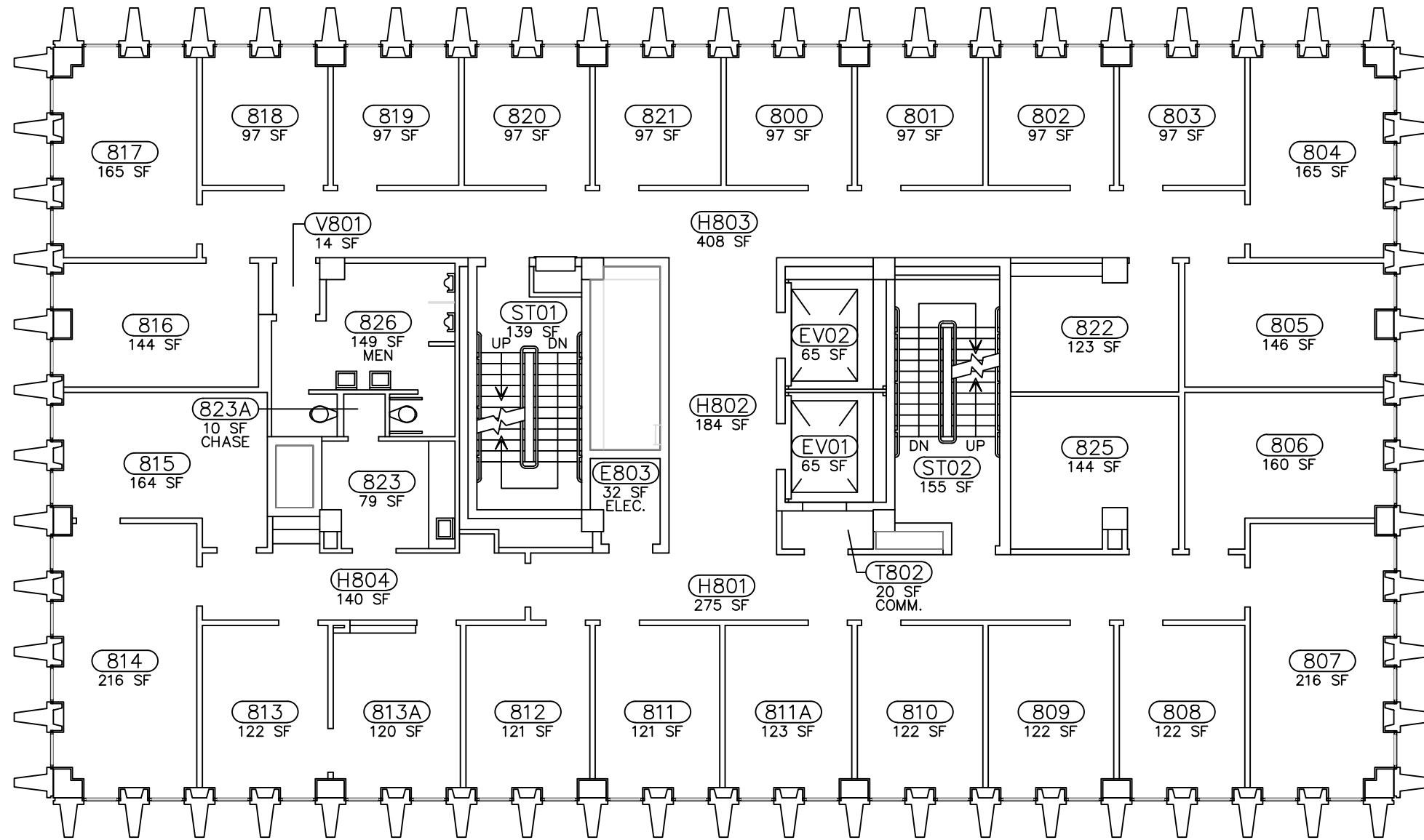
ORIGINAL: September 28, 2020
REVISIONS:
1
2
3
SCALE 3/32" = 1'

**F&ME**  
CONSULTANTS  
GEOTECHNICAL - ENVIRONMENTAL - MATERIALS  
1825 BLANDING STREET  
COLUMBIA, SC 29201

ASBESTOS CONTAINING MATERIALS INVESTIGATION  
WELSH HUMANITIES OFFICE BUILDING  
1620 College Street, Columbia, SC 29208  
General Building Plan  
Prepared for:  
University of South Carolina  
1300 Pickens Street  
Columbia, SC 29208

F&ME CONSULTANTS  
PROJECT NUMBER:  
E6200.280

FIGURE NUMBER:  
5



1  
A10

EIGHTH FLOOR PLAN - 054

SCALE: 3/32" = 1'-0"

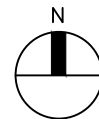
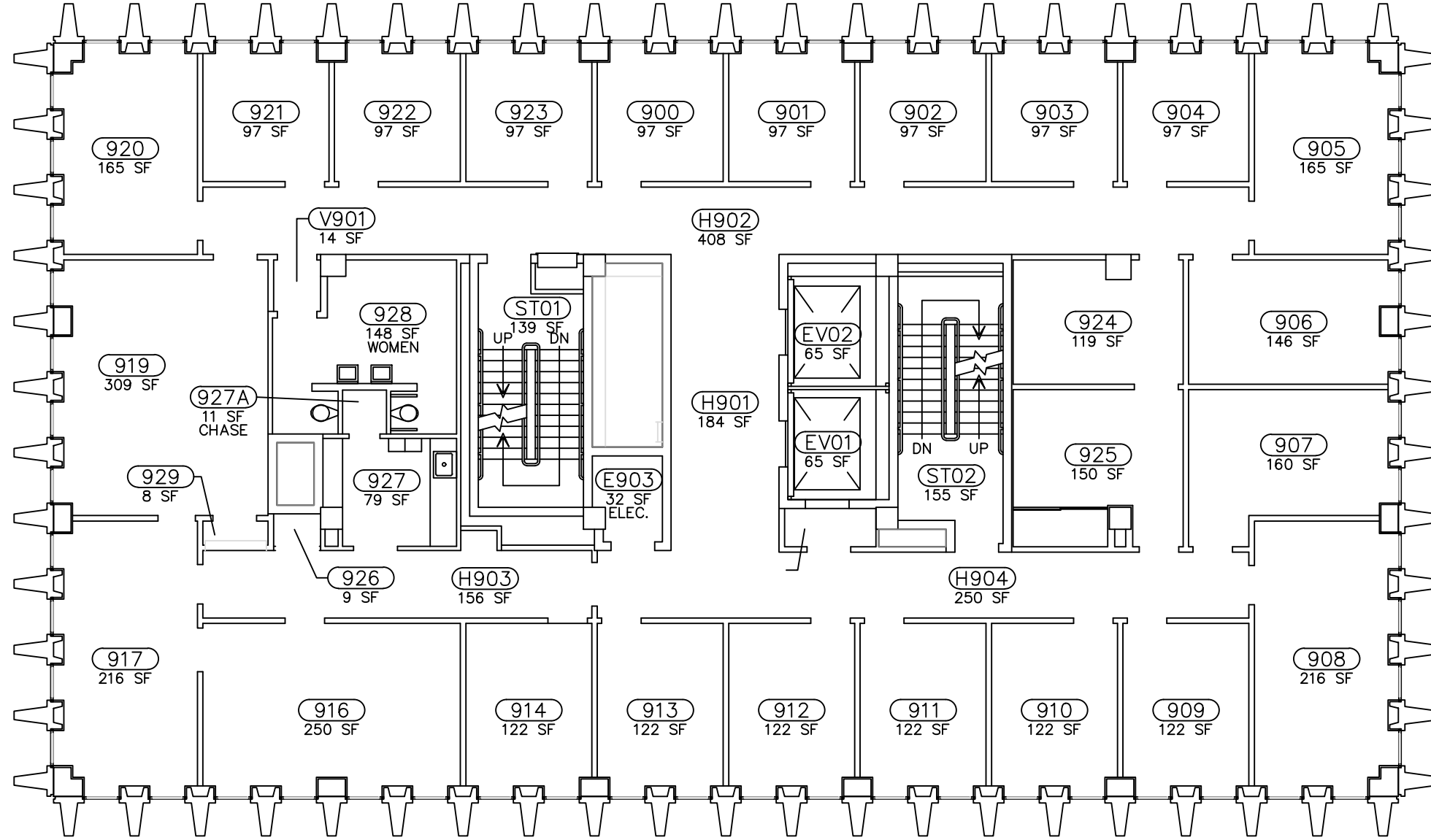
DRAWN BY: MSM	ORIGINAL: _____
CHKD. BY: TOR	September 28, 2020
APPR. BY: GME	REVISIONS:
NOTES:	1 _____
	2 _____
	3 _____
	SCALE: 3/32" = 1'

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 1620 College Street, Columbia, SC 29208  
 General Building Plan  
 Prepared for:  
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 Columbia, SC 29208

F&M CONSULTANTS  
 PROJECT NUMBER:  
 E6200.280

FIGURE NUMBER:  
 6



1  
A11

NINTH FLOOR PLAN - 054

SCALE: 3/32" = 1'-0"

DRWN BY: MSM
CHKD BY: TOR
APPR BY: GME
NOTES:

ORIGINAL: September 28, 2020
REVISIONS:
1
2
3
SCALE 3/32" = 1'

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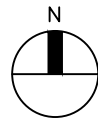
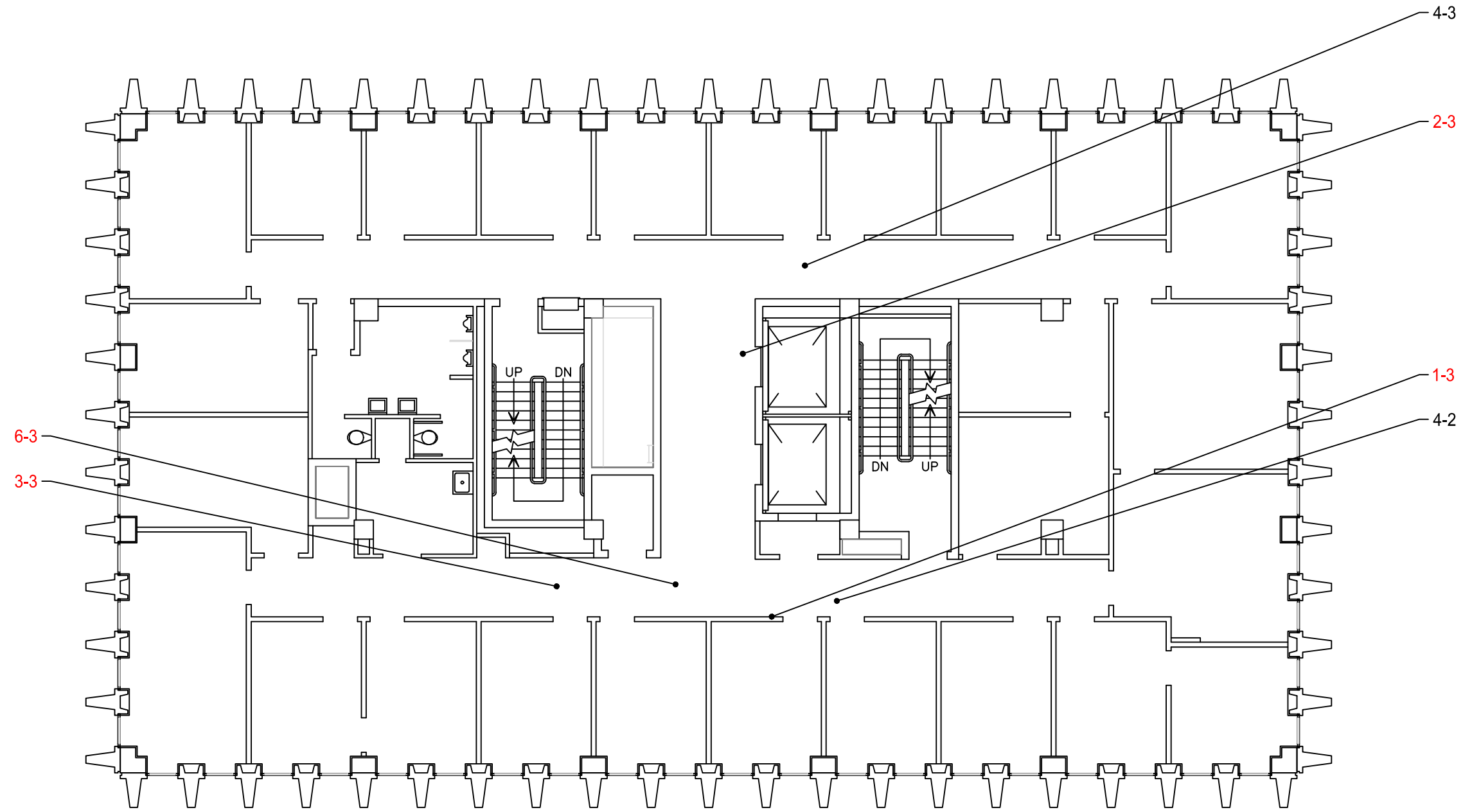
ASBESTOS CONTAINING MATERIALS INVESTIGATION  
 WELSH HUMANITIES OFFICE BUILDING  
 1620 College Street, Columbia, SC 29208  
 General Building Plan  
 Prepared for:  
 University of South Carolina  
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 Columbia, SC 29208

F&ME CONSULTANTS  
 PROJECT NUMBER:  
 E6200.280

FIGURE NUMBER:  
 7



Appendix C  
Sample Location Plans



1  
A6

**FOURTH FLOOR PLAN - 054**

SCALE: 3/32" = 1'-0"

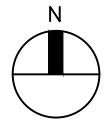
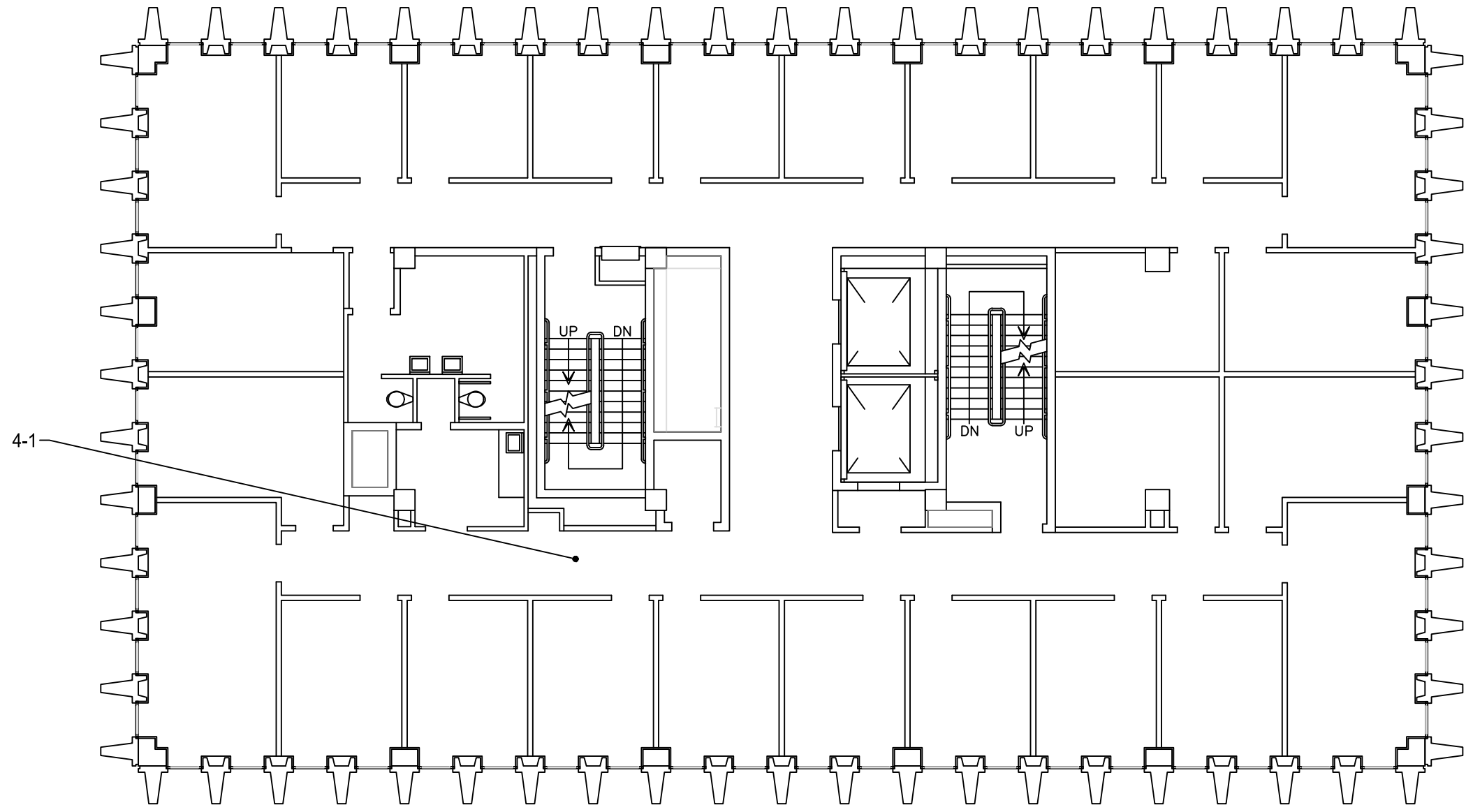
DRWN BY: MSM	CHKD BY: TOR	APPR BY: GME	NOTES:
ORIGINAL: September 28, 2020	REVISIONS:	1	2
		3	
			SCALE 3/32" = 1'

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 COLUMBIA, SC 29201

ASBESTOS CONTAINING MATERIALS INVESTIGATION  
 WELSH HUMANITIES OFFICE BUILDING  
 1620 College Street, Columbia, SC 29208  
 Sample Location Plan  
 Prepared for:  
 University of South Carolina  
 1300 Pickens Street  
 Columbia, SC 29208

F&ME CONSULTANTS  
 PROJECT NUMBER:  
**E6200.280**

FIGURE NUMBER:  
**8**



1  
A7

FIFTH FLOOR PLAN - 054

SCALE: 3/32" = 1'-0"

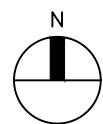
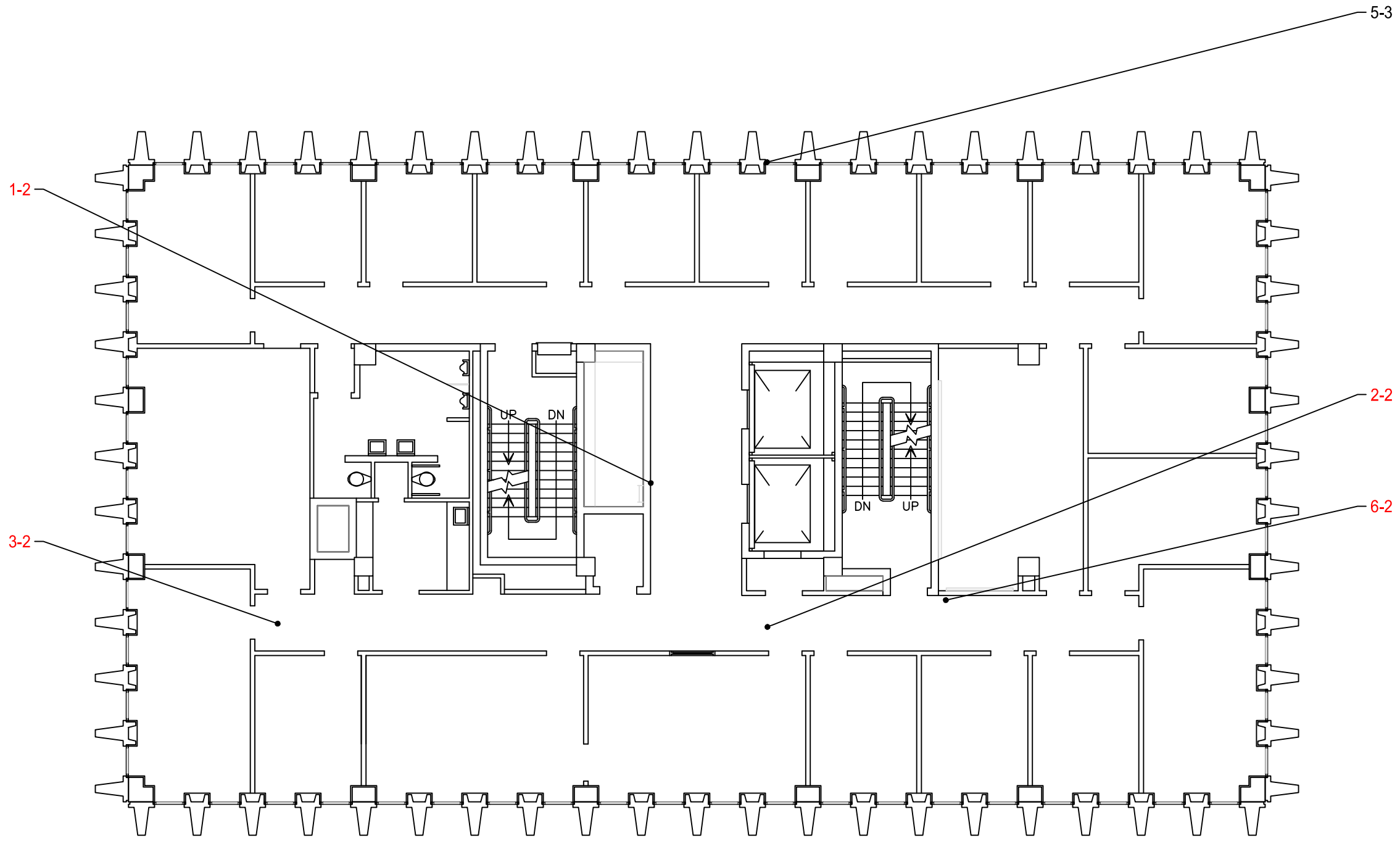
DRWN BY: MSM	APPR BY: GME
CHKD BY: MSM	NOTES:
ORIGINAL: September 28, 2020	
REVISIONS:	
1	
2	
3	
SCALE 3/32" = 1'	

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 WELSH HUMANITIES OFFICE BUILDING  
 1620 College Street, Columbia, SC 29208  
 Sample Location Plan  
 Prepared for:  
 University of South Carolina  
 1300 Pickens Street  
 Columbia, SC 29208

F&M CONSULTANTS  
 PROJECT NUMBER:  
 E6200.280

FIGURE NUMBER:  
 9



1  
A8

SIXTH FLOOR PLAN - 054

SCALE: 3/32" = 1'-0"

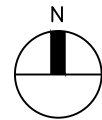
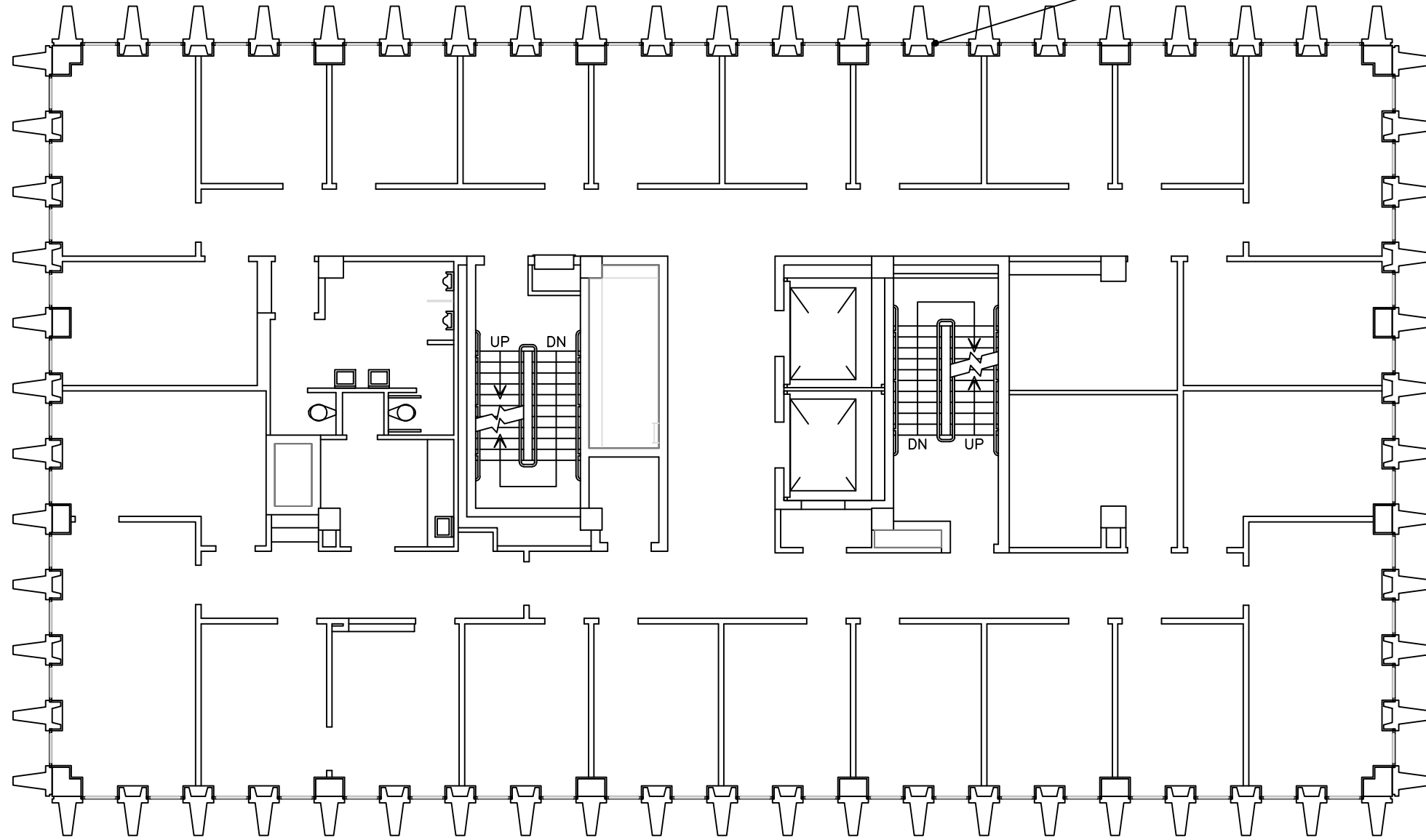
DRWN BY: MSM	CHKD BY: TOR	APPR BY: GME	NOTES:
ORIGINAL: September 28, 2020	REVISIONS:	1	
		2	
		3	
			SCALE 3/32" = 1'

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 1620 College Street, Columbia, SC 29208  
 Sample Location Plan  
 Prepared for:  
 University of South Carolina  
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F&M CONSULTANTS  
 PROJECT NUMBER:  
 E6200.280

FIGURE NUMBER:  
 10



1  
A10

**EIGHTH FLOOR PLAN - 054**

SCALE: 3/32" = 1'-0"

5-2

F&ME CONSULTANTS  
PROJECT NUMBER:

E6200.280

FIGURE NUMBER:

11

ASBESTOS CONTAINING MATERIALS INVESTIGATION  
WELSH HUMANITIES OFFICE BUILDING  
1620 College Street, Columbia, SC 29208

Sample Location Plan

Prepared for:  
University of South Carolina  
1300 Pickens Street  
Columbia, SC 29208

**F&ME**  
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1825 BLANDING STREET  
COLUMBIA, SC 29201

ORIGINAL:  
September 28, 2020

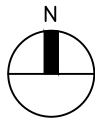
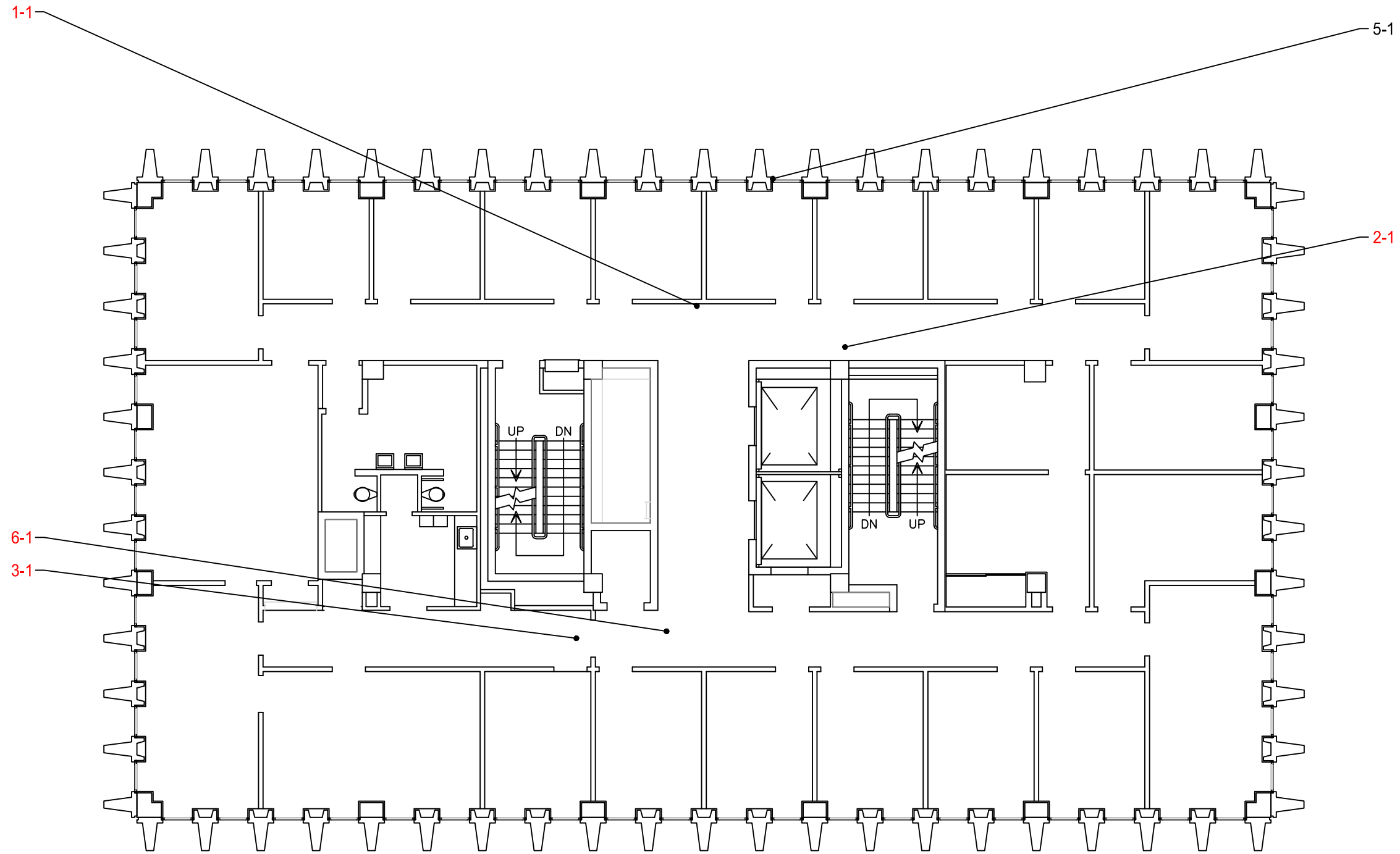
REVISIONS:

1	
2	
3	

SCALE 3/32" = 1'

DRWN BY: MSM  
CHKD BY: TOR  
APPR BY: GME

NOTES:



1  
A11

**NINTH FLOOR PLAN - 054**

SCALE: 3/32" = 1'-0"

DRWN BY: MSM	CHKD BY: TOR	APPR BY: GME	NOTES:
ORIGINAL: September 28, 2020	REVISIONS:	1	
		2	
		3	
			SCALE 3/32" = 1'

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 COLUMBIA, SC 29201

ASBESTOS CONTAINING MATERIALS INVESTIGATION  
 WELSH HUMANITIES OFFICE BUILDING  
 1620 College Street, Columbia, SC 29208  
 Sample Location Plan  
 Prepared for:  
 University of South Carolina  
 1300 Pickens Street  
 Columbia, SC 29208

F&M CONSULTANTS  
 PROJECT NUMBER:  
**E6200.280**

FIGURE NUMBER:  
**12**

Appendix D  
Homogeneous Area Plans



HA-1 - Joint Compound Associated with Drywall Walls (Not Shown - Typical All Floors)



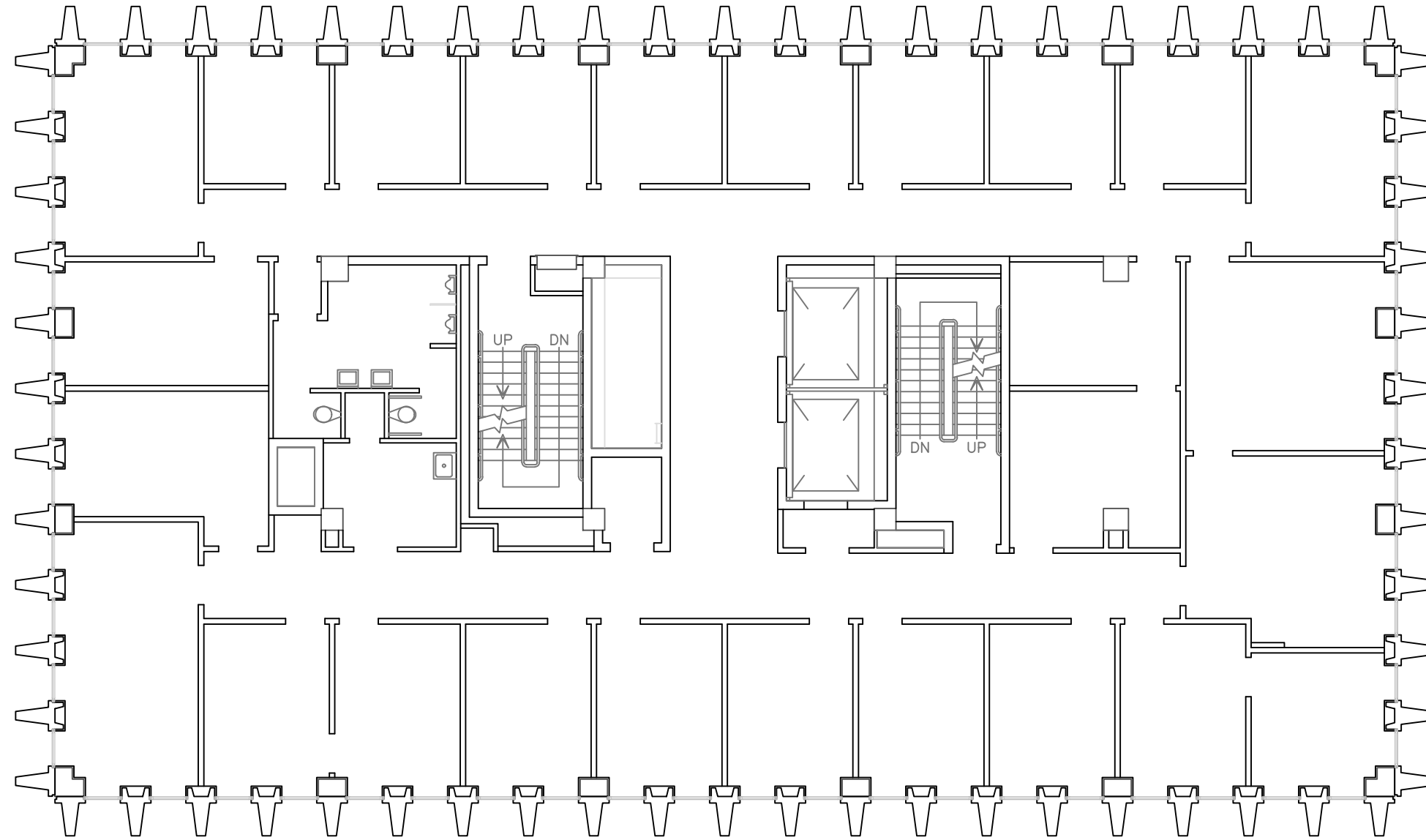
HA-3 - Black Mastic on Non-ACM Fiberglass Pipe Insulation (Not Shown - Typical All Floors)



HA-2 - Black Mastic on Non-ACM Fiberglass Duct Wrap (Not Shown - Typical All Floors)



HA-4 - Red/Brown Metal Duct Mastic (Not Shown - Typical All Floors)



ASBESTOS CONTAINING MATERIALS INVESTIGATION  
 WELSH HUMANITIES OFFICE BUILDING  
 1620 College Street, Columbia, SC 29208

Homogeneous Area Plan  
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 PROJECT NUMBER:  
 E6200.280

FIGURE NUMBER:

13

**F&ME**  
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 COLUMBIA, SC 29201

DRWN BY: MSM	CHKD BY: TOR	APPR BY: GME	NOTES:
ORIGINAL: October 1, 2020	REVISIONS:	1	
		2	
		3	
			SCALE 3/32" = 1'



Appendix E  
Summary of Samples

## Appendix E: Summary of Samples

Sample ID	Description
1-1	Drywall/Joint Compound
1-2	Drywall/Joint Compound
1-3	Drywall/Joint Compound
2-1	Black Mastic on non-ACM Fiberglass Duct Wrap
2-2	Black Mastic on non-ACM Fiberglass Duct Wrap
2-3	Black Mastic on non-ACM Fiberglass Duct Wrap
3-1	Black Mastic on non-ACM Fiberglass Pipe Wrap
3-2	Black Mastic on non-ACM Fiberglass Pipe Wrap
3-3	Black Mastic on non-ACM Fiberglass Pipe Wrap
4-1	2' x 2' Ceiling Tile
4-2	2' x 2' Ceiling Tile
4-3	2' x 2' Ceiling Tile
5-1	Exterior Window Caulk
5-2	Exterior Window Caulk
5-3	Exterior Window Caulk
6-1	Brown/Red Mastic on Metal HVAC Duct
6-2	Brown/Red Mastic on Metal HVAC Duct
6-3	Brown/Red Mastic on Metal HVAC Duct



## Appendix F

### Summary of Asbestos Containing Materials

## APPENDIX F: SUMMARY OF ASBESTOS CONTAINING MATERIALS

Sample ID	Sample Description	Material	% Asbestos
1-1	Drywall/Joint Compound	Drywall	None Detected
		Joint Compound	2% Chrysotile
		Tape	None Detected
1-2	Drywall/Joint Compound	Drywall	None Detected
		Joint Compound	Positive Stop
		Tape	None Detected
1-3	Drywall/Joint Compound	Drywall	None Detected
		Joint Compound	Positive Stop
		Tape	None Detected
2-1	Black Mastic on non-ACM Fiberglass Duct Wrap	Mastic	5% Chrysotile
2-2	Black Mastic on non-ACM Fiberglass Duct Wrap	Mastic	Positive Stop
2-3	Black Mastic on non-ACM Fiberglass Duct Wrap	Mastic	Positive Stop
3-1	Black Mastic on non-ACM Fiberglass Pipe Wrap	Mastic	5% Chrysotile
3-2	Black Mastic on non-ACM Fiberglass Pipe Wrap	Mastic	Positive Stop
3-3	Black Mastic on non-ACM Fiberglass Pipe Wrap	Mastic	Positive Stop
6-1	Brown/Red Mastic on Metal HVAC Duct	Mastic	3% Chrysotile
6-2	Brown/Red Mastic on Metal HVAC Duct	Mastic	Positive Stop
6-3	Brown/Red Mastic on Metal HVAC Duct	Mastic	Positive Stop



Appendix G  
Summary of Inspection

## SUMMARY OF INSPECTION

### 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

<u>Functional Space No.:</u>	<u>Functional Space Type:</u>	
1.	C	Ceilings

#### ACM CHARACTERISTICS:

F = Friable

NF = Non-Friable

#### ASSESSMENT RESULTS:

(Refer to Physical Assessment Data)

#### POTENTIAL FOR DISTURBANCE:

(Refer to Physical Assessment Data)

## SUMMARY OF INSPECTION

### PHYSICAL ASSESSMENT CATEGORIES:

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)

<u>Hazard Rank</u>	<u>ACM Condition</u>	<u>ACM Disturbance Potential</u>
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

## Appendix H

### Physical Assessment Data Sheets



## PHYSICAL ASSESSMENT DATA SHEET

**Building:** USC- J. Welsh Humanities Office Building

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

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

**Description:** HA-1, Joint Compound associated with Drywall above ceiling grid

**Approximate Amount of Material (SF or LF):** >5,000 SF

**Condition:**

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

**Extent of Damage:** X Localized            Distributed

**Type of Damage:**            Deterioration            Water            Physical

**Description:**

Asbestos-containing joint compound associated with drywall wall and ceiling systems was noted throughout the Building. It was also noted above the suspended ceilings and interacting with the mechanical fan coil units in to be impacted by the planned renovations. This material was found in an intact non-friable condition, with no damage noted. However, this material will be rendered friable during the abatement process and therefore must be removed under full containment means and methods.

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

**Potential for Disturbance:**

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

**Overall Potential Disturbance Rating:**

	Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
	<u>          </u>	<u>          </u>	<u>7</u>

**Overall Hazard Rank #:**

	Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
	<u>          </u>	<u>          </u>	<u>          </u>	<u>1</u>

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

**Signed:**  **Date:** 9/30/2020

**PHYSICAL ASSESSMENT DATA SHEET**

**Building:** USC J. Welsh Humanities Office Building

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

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

**Description:** HA-2, Black Mastic on non-ACM fiberglass over metal HVAC duct

**Approximate Amount of Material (SF or LF):** ~1,000 SF

**Condition:**

**Percent Damage:** X >0% \_\_\_\_\_ <10% \_\_\_\_\_ >10% \_\_\_\_\_ <25% \_\_\_\_\_ >25%

**Extent of Damage:** X Localized \_\_\_\_\_ Distributed \_\_\_\_\_

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

**Description:**

Asbestos containing black mastic was found on non-ACM fiberglass duct wrap above the suspended ceilings throughout the areas to be impacted by the planned renovations. This material was noted to be in a intact, and non-friable condition with no damage noted.

**Overall Condition Rating:** Sig. Damaged \_\_\_\_\_ Damaged \_\_\_\_\_ Good \_\_\_\_\_ X

**Potential for Disturbance:**

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:	_____	_____	<u>X</u>	_____
Influence of Vibration	_____	_____	<u>X</u>	_____
Frequency of Air Erosion	_____	_____	<u>X</u>	_____
Potential of Water Erosion	_____	_____	<u>X</u>	_____


**Overall Potential Disturbance Rating:**

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
_____	_____	<u>8</u>

**Overall Hazard Rank #:**

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
_____	_____	_____	<u>1</u>

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

**Signed:**  **Date:** 9/30/2020

## PHYSICAL ASSESSMENT DATA SHEET

**Building:** USC J. Welsh Humanities Office Building

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

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

**Description:** HA-3, Black Mastic on non-ACM fiberglass wrap over metal domestic plumbing lines

**Approximate Amount of Material (SF or LF):** ~200 SF

**Condition:**

**Percent Damage:** X >0% \_\_\_\_\_ <10% \_\_\_\_\_ >10% \_\_\_\_\_ <25% \_\_\_\_\_ >25%

**Extent of Damage:** X Localized \_\_\_\_\_ Distributed \_\_\_\_\_

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

**Description:**

Asbestos containing black mastic was found on non-ACM pipe wrap insulation above the suspended ceilings throughout the areas to be impacted by the planned renovations. This material was noted to be in an intact, and in a non-friable condition with no damage being noted.

**Overall Condition Rating:** Sig. Damaged \_\_\_\_\_ Damaged \_\_\_\_\_ Good \_\_\_\_\_ X

**Potential for Disturbance:**

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:	_____	_____	<u>X</u>	_____
Influence of Vibration	_____	_____	<u>X</u>	_____
Frequency of Air Erosion	_____	_____	<u>X</u>	_____
Potential of Water Erosion	_____	_____	<u>X</u>	_____

**Overall Potential Disturbance Rating:**

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
_____	_____	<u>8</u>

**Overall Hazard Rank #:**

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
_____	_____	_____	<u>1</u>

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

**Signed:**  **Date:** 9/30/2020

**PHYSICAL ASSESSMENT DATA SHEET**

**Building:** USC J. Welsh Humanities Office Building

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

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

**Description:** HA-4, Brown/Red Mastic on metal HVAC ducts

**Approximate Amount of Material (SF or LF):** ~500 SF

**Condition:**

**Percent Damage:** X >0% \_\_\_\_\_ <10% \_\_\_\_\_ >10% \_\_\_\_\_ <25% \_\_\_\_\_ >25%

**Extent of Damage:** X Localized \_\_\_\_\_ Distributed \_\_\_\_\_

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

**Description:**

Asbestos containing black mastic was found above the suspended ceilings on the seams metal HVAC duct underneath non-ACM fiberglass duct wrap insulation. This material was found to be intact, and in a non-friable condition with no damage being noted.

**Overall Condition Rating:** Sig. Damaged \_\_\_\_\_ Damaged \_\_\_\_\_ Good \_\_\_\_\_ X

**Potential for Disturbance:**

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:	_____	_____	<u>X</u>	_____
Influence of Vibration	_____	_____	<u>X</u>	_____
Frequency of Air Erosion	_____	_____	<u>X</u>	_____
Potential of Water Erosion	_____	_____	<u>X</u>	_____

**Overall Potential Disturbance Rating:**

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
_____	_____	<u>8</u>

**Overall Hazard Rank #:**

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
_____	_____	_____	<u>1</u>

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

**Signed:**  **Date:** 9/30/2020

Appendix I  
Laboratory Analysis Reports



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

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

<http://www.EMSL.com> / [greensborolab@emsl.com](mailto:greensborolab@emsl.com)

EMSL Order: 022005651

Customer ID: FMEC62

Customer PO: E6200.28

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:** 09/28/2020 10:00 AM

**Analysis Date:** 09/28/2020

**Collected Date:**

**Project:** USC Humanities Bldg. 4th-9th Floor

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1-1-Drywall <small>022005651-0001</small>	Drywall/Joint Compound	Brown/Gray Fibrous Homogeneous	10% Cellulose 1% Glass	89% Non-fibrous (Other)	None Detected
1-1-Joint Compound <small>022005651-0001A</small>	Drywall/Joint Compound	Beige Non-Fibrous Homogeneous		30% Ca Carbonate 68% Non-fibrous (Other)	2% Chrysotile
1-1-Tape <small>022005651-0001B</small>	Drywall/Joint Compound	Beige Fibrous Homogeneous	100% Cellulose		None Detected
1-2-Drywall <small>022005651-0002</small>	Drywall/Joint Compound	Brown/Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
1-2-Joint Compound <small>022005651-0002A</small>	Drywall/Joint Compound				Positive Stop (Not Analyzed)
1-2-Tape <small>022005651-0002B</small>	Drywall/Joint Compound	Beige Fibrous Homogeneous	100% Cellulose		None Detected
1-3-Drywall <small>022005651-0003</small>	Drywall/Joint Compound	Brown/Gray Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
1-3-Joint Compound <small>022005651-0003A</small>	Drywall/Joint Compound				Positive Stop (Not Analyzed)
1-3-Tape <small>022005651-0003B</small>	Drywall/Joint Compound	Beige Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
2-1 <small>022005651-0004</small>	HVAC Black Mastic on non-fiberglass Wrap over Metal Duct	Black Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
2-2 <small>022005651-0005</small>	HVAC Black Mastic on non-fiberglass Wrap over Metal Duct				Positive Stop (Not Analyzed)
3-1 <small>022005651-0006</small>	Black Mastic on non-ACM Fiberglass Wrap	Black Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
3-2 <small>022005651-0007</small>	Black Mastic on non-ACM Fiberglass Wrap				Positive Stop (Not Analyzed)
4-1 <small>022005651-0008</small>	2x2 Ceiling Tile	Gray/White Fibrous Homogeneous	55% Cellulose 10% Min. Wool	30% Perlite 5% Non-fibrous (Other)	None Detected
4-2 <small>022005651-0009</small>	2x2 Ceiling Tile	Gray/White Fibrous Homogeneous	55% Cellulose 10% Min. Wool	30% Perlite 5% Non-fibrous (Other)	None Detected

Initial report from: 09/30/2020 08:20:56



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

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

<http://www.EMSL.com> / [greensborolab@emsl.com](mailto:greensborolab@emsl.com)

**EMSL Order:** 022005651  
**Customer ID:** FMEC62  
**Customer PO:** E6200.28  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
4-3 <i>022005651-0010</i>	2x2 Ceiling Tile	White/Beige Fibrous Homogeneous	55% Cellulose 12% Min. Wool	30% Perlite 3% Non-fibrous (Other)	None Detected
5-1 <i>022005651-0011</i>	Exterior Window Caulk	Brown/Gray Non-Fibrous Homogeneous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
5-2 <i>022005651-0012</i>	Exterior Window Caulk	Brown/Gray Non-Fibrous Heterogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
6-1 <i>022005651-0013</i>	Brown/Red Mastc on Metal Duct	Brown Non-Fibrous Homogeneous		5% Ca Carbonate 92% Non-fibrous (Other)	3% Chrysotile
6-2 <i>022005651-0014</i>	Brown/Red Mastc on Metal Duct				Positive Stop (Not Analyzed)

Analyst(s)

*Kristie Elliott (11)*

*Ryan Rains (4)*

Stephen Bennett, Laboratory Manager  
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC NVLAP Lab Code 102104-0, CA ELAP 2689, Virginia 3333-000228, West Virginia LT000321

Initial report from: 09/30/2020 08:20:56



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284  
Tel/Fax: (336) 992-1025 / (336) 992-4175  
<http://www.EMSL.com> / [greensborolab@emsl.com](mailto:greensborolab@emsl.com)

**EMSL Order:** 022005651  
**Customer ID:** FMEC62  
**Customer PO:** E6200.28  
**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:** 09/28/2020 10:00 AM  
**Analysis Date:** 09/30/2020  
**Collected Date:**

**Project:** USC Humanities Bldg. 4th-9th Floor


## 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
5-3 022005651-0015	Exterior Window Caulk	Brown/Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)  

---

Stephen Bennett (1)

---

Stephen Bennett, Laboratory Manager  
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. EMSL recommends that samples reported as none detected or <1% undergo additional analysis via PLM to avoid the possibility of false negatives.

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 10/01/2020 08:29:38



Appendix J  
Chain of Custody Forms



EMSL ANALYTICAL, INC  
LABORATORY • PRODUCTS • TRAINING

**Asbestos Chain of Custody**  
EMSL Order Number (Lab Use Only):

5651

Company Name : F&ME Consultants		EMSL Customer ID: FME62	
Street: 3112 Devine Street		City: Columbia	State/Province: SC
Zip/Postal Code: 29205		Country: USA	Telephone #: 803-254-4540
Report To (Name): Glynn Ellen		Fax #: 803-254-4542	
Email Address: gellen@fmeconsultants.com, tross@fmeconsultants.com, mmincey@fmeconsultants.com		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
Project Name/Number: USC Humanities Bldg. 4 <sup>th</sup> - 9 <sup>th</sup> Floor		Purchase Order: E6200.28	
U.S. State Samples Taken: SC		EMSL Project ID (Internal Use Only):	
EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different - If Bill to is Different note instructions in Comments**		CT Samples: <input checked="" type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	
<i>Third Party Billing requires written authorization from third party</i>			

**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.

<p><b>PCM - Air</b> <input type="checkbox"/> Check if samples are from NY</p> <p><input type="checkbox"/> NIOSH 7400</p> <p><input type="checkbox"/> w/ OSHA 8hr. TWA</p> <p><b>PLM - Bulk (reporting limit)</b></p> <p><input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (&lt;1%)</p> <p><input type="checkbox"/> PLM EPA NOB (&lt;1%)</p> <p>Point Count</p> <p><input type="checkbox"/> 400 (&lt;0.25%) <input type="checkbox"/> 1000 (&lt;0.1%)</p> <p>Point Count w/Gravimetric</p> <p><input type="checkbox"/> 400 (&lt;0.25%) <input type="checkbox"/> 1000 (&lt;0.1%)</p> <p><input type="checkbox"/> NYS 198.1 (friable in NY)</p> <p><input type="checkbox"/> NYS 198.6 NOB (non-friable-NY)</p> <p><input type="checkbox"/> NYS 198.8 SOF-V</p> <p><input type="checkbox"/> NIOSH 9002 (&lt;1%)</p>	<p><b>TEM - Air</b> <input type="checkbox"/> 4-4.5hr TAT (AHERA only)</p> <p><input type="checkbox"/> AHERA 40 CFR, Part 763</p> <p><input type="checkbox"/> NIOSH 7402</p> <p><input type="checkbox"/> EPA Level II</p> <p><input type="checkbox"/> ISO 10312</p> <p><b>TEM - Bulk</b></p> <p><input checked="" type="checkbox"/> TEM EPA NOB</p> <p><input type="checkbox"/> NYS NOB 198.4 (non-friable-NY)</p> <p><input type="checkbox"/> Chatfield SOP</p> <p><input type="checkbox"/> TEM Mass Analysis-EPA 600 sec. 2.5</p> <p><b>TEM - Water:</b> EPA 100.2</p> <p>Fibers &gt;10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking</p> <p>All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking</p>	<p><b>TEM- Dust</b></p> <p><input type="checkbox"/> Microvac - ASTM D 5755</p> <p><input type="checkbox"/> Wipe - ASTM D6480</p> <p><input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167)</p> <p><b>Soil/Rock/Vermiculite</b></p> <p><input type="checkbox"/> PLM EPA 600/R-93/116 with milling prep (&lt;1%)</p> <p><input type="checkbox"/> PLM EPA 600/R-93/116 with milling prep (&lt;0.25%)</p> <p><input type="checkbox"/> TEM EPA 600/R-93/116 with milling prep (&lt;0.1%)</p> <p><input type="checkbox"/> TEM Qualitative via Filtration Prep</p> <p><input type="checkbox"/> TEM Qualitative via Drop Mount Prep</p> <p><input type="checkbox"/> Cincinnati Method EPA 600/R-04/004 - PLM/TEM (BC only)</p> <p><b>Other:</b></p> <p><input type="checkbox"/></p>
---	---	--

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

Samplers Name: Tim Ross      Samplers Signature: \_\_\_\_\_

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1-1 thru 1-3	Drywall/Joint Compound		
2-1 thru 2-3	HVAC Black Mastic on non-Fiberglass wrap over Metal duct		
3-1 thru 3-1	Dom. Plumbing Black Mastic on non-ACM Fiberglass wrap		
4-1 thru 4-3	2'x2' Ceiling Tile		
5-1 thru 5-3	Exterior Window Caulk		

Client Sample # (s): 1-1 - 6-3      Total # of Samples: 18

Relinquished (Client): Tim Ross      Date: 9/25/2020      Time: 1400

Received (Lab): *NS*      Date: 9/28/20      Time: 10:00

Comments/Special Instructions: Positive Stop. TEM 3<sup>rd</sup> NOB  
 (1) EMSL FX 7959 3864 5095



Appendix K  
Personnel Certifications

# SCDHEC ISSUED

## Asbestos ID Card

---

**Glynn M Ellen**



		Expiration Date:
<b>SUPERAHERA</b>	<b>SA-00455</b>	<b>01/27/21</b>
<b>CONSULTMP</b>	<b>ASB-22641</b>	<b>01/26/21</b>
<b>CONSULTPD</b>	<b>PD-00098</b>	<b>06/06/20</b>
<b>AIRSAMPLER</b>	<b>AS-00079</b>	<b>01/27/21</b>

This card is nontransferable and is 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

---

**Timothy Ross**



		Expiration Date:
<b>AIRSAMPLER</b>	<b>AS-00533</b>	<b>01/27/21</b>
<b>CONSULTBI</b>	<b>BI-01637</b>	<b>01/26/21</b>
<b>SUPERAHERA</b>	<b>SA-02840</b>	<b>01/27/21</b>

This card is nontransferable and is 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

Appendix L  
Regulatory Summary

# 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, caulking's, 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.

Appendix M  
Abatement Project Forms



**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 <input type="checkbox"/> / Revised <input type="checkbox"/> / Cancellation <input type="checkbox"/> (check one)	Project License I.D. (For Revisions/Cancellations): _____
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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)
		<input type="checkbox"/> FRIABLE <input type="checkbox"/> NON-FRIABLE
		<input type="checkbox"/> FRIABLE <input type="checkbox"/> NON-FRIABLE
		<input type="checkbox"/> FRIABLE <input type="checkbox"/> NON-FRIABLE
		<input type="checkbox"/> FRIABLE <input type="checkbox"/> NON-FRIABLE

VII. SCHEDULED DATES OF REMOVAL: START DATE: \_\_\_\_\_ COMPLETION DATE: \_\_\_\_\_  
 WORK DAYS: \_\_\_\_\_ WORK HOURS: \_\_\_\_\_

<p><b>APPLICATIONS MUST BE SUBMITTED WITH FEES PRIOR TO THE SCHEDULED START DATE AS FOLLOWS:</b>          NESHAP PROJECTS: 10 WORKING DAYS          SMALL PROJECTS: 4 WORKING DAYS          MINOR PROJECTS: 2 WORKING DAYS</p> <p>Non-Friable (NESAP-sized) Projects: 4 working days. No fee for non-friable ACM.</p> <p>For additional information concerning regulatory requirements call or visit our Web site at <a href="http://www.scdhec.gov/environment/baq/asbestos.aspx">http://www.scdhec.gov/environment/baq/asbestos.aspx</a></p>	<p><b>FEE SCHEDULE FOR FRIABLE ASBESTOS-CONTAINING MATERIALS:</b>          10 CENTS PER SQUARE FOOT OR LINEAR FOOT          MINIMUM FEE OF \$25.00          MAXIMUM FEE OF \$1000.00</p>
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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 CRUMBLLED, 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)



## 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>

