The Boudreaux Group
1330 Lady St., Suite 500 (29201) P.O. Box 5695 Columbia, SC 29250
803 799 0247 *p* 803 771-6844 *f*

Addendum No. 3

Project: **USC Hamilton College Renovation**
Project No.: **U-651-07**
State Permanent Improvement Project No.: **H27-9905-SG**
Date of Issue: **May 8, 2014**

TO: ALL BIDDERS OF RECORD, CONSULTANTS, AND OWNER:

The following items shall take precedence over the drawings and specifications for the above named project and shall become a part of the contract documents. Where any item called for in the specifications, or indicated on the drawings, is not supplemented hereby, the original requirements shall remain in effect. Where any original item is amended, voided or superseded hereby, the provisions of such item not specifically amended, voided or superseded shall remain in effect.

****CONTRACTOR SHALL ACKNOWLEDGE RECEIPT OF ADDENDUM.****

ADDENDUM ITEMS:
This addendum consists of 8 pages and the following attachments: *085123 Steel Window Repair and Restoration, SK-A-05, SK-A-06, SK-A-07, SK-A-08, SK-A-09, SK-A-10, SK-A-11, SK-A-12, MS1.1, M1.1, M1.2, M1.3, M2.3, M4.3, AB-1, AB-2, AB-3, LBP-1, LBP-2, and LBP-3*.

I. GENERAL CLARIFICATION

1. See the Hazardous Materials Abatement Drawings for locations of hazardous materials.
2. We do not anticipate any exterior patching for the existing concrete walls.
3. The ACM caulking located is around the outside perimeter of the interior window casings. Sides, tops and bottoms. It is not on the sashes. See the Hazardous Materials Abatement Specifications for more information.
4. USC will dispose of the LBP (lead-based paint) residue and chips that are generated during actual removal and/or abatement of LBP. The LBP Abatement Contractor will be required to supply all appropriate containers for handling, holding and disposing of these hazardous materials. See the Hazardous Materials Abatement Specifications for more information.
5. The procedures for handling the exterior window glazing are found in the project specifications Section 02080 – Asbestos Abatement, Section 1.5 Scope of Work – Abatement Activities, Paragraph B. Exterior Abatement Activities, Item 1. ACM Window Glazing. In addition, the Contractor will have the option of utilizing means and methods for removal of the exterior window glazing in place prior to removal of sashes from the existing window frames or after the window sashes have been removed from the window frame as a component of the historic reconditioning off-site. However, the window glazing is friable in its current condition and shall only be handled by those hold the proper licensing and certifications necessary. Should the Contractor choose to remove the windows and abate the window glazing off site, all loose, delaminating and/or flaking window glazing shall be removed from the sashes to the satisfaction of the Owners Representative prior to their removal. In addition, prior to removal of sashes from the existing window frames, windows shall be inspected by the Owners Representative to verify that only intact glazing in a non-friable condition remains on the sashes. Once approved window sashes shall be removed from the window frame and wrapped in polyethylene sheeting for

transportation to the off-site location. Contractor shall be required to submit in his or her work plan procedures to be utilized off-site to manage, handle and dispose of ACM glazing. All procedures will need to be pre-approved by the SCDHEC prior to the start of abatement operations.

6. There will be no metal components in any of the panel signage for this project.

II. ARCHITECTURAL

Specifications

1. 085123 Steel Window Repair and Restoration – Add the attached specification.
2. 102800 Toilet and Bath Accessories – Delete the following sections in their entirety: Part 2.2B and Part 2.2H. Toilet Tissue Dispensers, Soap Dispensers, and Towel Dispensers will be supplied by the owner and installed by the contractor.
3. 018113 Sustainable Design Requirements – LEED for New Construction and Major Renovations: Omit requirement for procurement of Certified Wood products as detailed in Section 2- Product Requirements (Article 2.4), Credit MR7- Certified Wood, and all references to this credit requirement found within the Project Manual. Certified Wood is not a Credit requirement for this project.
4. 018113 Sustainable Design Requirements - LEED for New Construction and Major Renovations: The minimum acceptable diversion rate for Construction Waste is 75%, Per Section 1- General (Article 1.6), however recent projects are achieving 90% diversion and is a goal for this project.
5. 018113 Sustainable Design Requirements - LEED for New Construction and Major Renovations: Per Section 3- Execution (Article 3.2) Measurement and Verification, all systems for the sub-metering of the building as required by the Contractor are detailed in the Contract Documents. The LEED Measurement and Verification plan is provided by the Owner's consultant and is responsible for performing the performance and verification of the systems.
6. 087111 Door Hardware, Part 2.4, Section A – Delete and replace with the following: "The Contractor shall furnish the keyed permanent cores and keys for the project"
7. 087111Door Hardware, Part 2.4, Section B – Delete the last two sentences of the paragraph and replace with the following: "Contractor is to provide and install Best locks and cores or locks that can receive Best cores to be compatible with University of South Carolina standard keying system. In either case the Contractor is responsible for providing all permanent cores."

Drawings

1. Sheets A1.3, A1.2, A3.4, A3.5, and A7.1 – Remove the fire rating and revise wall types as shown on the attached sketches SK-A-05 and SK-A-06. See sketches SK-A-07, SK-A-08, SK-A-09, SK-A-10 for revised plan details. See sketch SK-A-11 for revised door schedule for doors 200B, 204A, 204B, 301, 302, 303, 323, 324, 325, H302, and H303. See sketch SK-A-12 for revised wall type 6.
2. Sheet A3.2 – Add the following note: "All Toilet Tissue Dispensers, Soap Dispensers, and Towel Dispensers will be supplied by the owner and installed by the contractor."
3. Sheet A3.2 – Under Typical Toilet Accessory Mounting Requirements for Type mark M-1: Replace the word "Frameless" with "Stainless Steel Frame". See specifications for size requirements.
4. Sheet A7.3 – See window schedule below for frame detail identifications at window W8E:

WINDOW				FRAME		
MARK	SIZE		GLAZING TYPE	HEAD	JAMB	SILL
	WIDTH	HEIGHT				
W8E	2'-11"	7'-8"	G2	3A7.3	6A7.3	9A7.3

10. Sheet A8.3 Detail 7 – The height of the Metal USC Logo (indicated by dashed lines) shall be 2'-7".
11. Sheet AX1.1 – For clarification Mechanical Room 114 shall have a fire extinguisher as shown on sheet A1.1.

Prior Approvals

Additional Acceptable Manufacturers: The following is a list of manufacturers that are approved for this project providing they can comply with the specifications and are of equal or greater quality, and function and perform like the specified products: (Note: inclusion to the list of acceptable manufacturers does not eliminate the necessity to comply with specifications. Non-compliant products will be rejected regardless of manufacturer being listed.)

	Description	Manufacturer (Product)
1.	Wood Ceilings	Norton Industries
2.	Stucco System	Master Wall Inc.
3.	Glass Railing System	Global Glass Railings *(Railing design shall be a custom rail as shown on the drawings)*

III. STRUCTURAL

Specifications

1. 033713 Shotcrete - Replace paragraph 3.2.D with the following:

"D. Shotcrete placed against existing concrete or masonry:

1. At the First Story: After existing lead paint has been abated by the lead abatement contractor, remove unsound material before applying shotcrete. Chip or scarify any area to be repaired to remove offsets which would cause an abrupt change in thickness. Taper edges to leave no square shoulders at the perimeter of a cavity. Remove loose material from areas receiving shotcrete. Wet the surface until it is damp, but without visible free water. Remove oil, grease and other contaminants to provide a surface for proper bonding of the shotcrete. Refer to Hazardous Materials Abatement drawings and specifications for locations and requirements for dealing with hazardous materials.
2. Above the First Story: After loose lead paint has been abated by the lead abatement contractor, apply shotcrete directly to existing wall surfaces. Refer to Hazardous Materials Abatement drawings and specifications for locations and requirements for dealing with hazardous materials."

IV. MECHANICAL

Drawings

1. Sheet MS1.1, Mechanical Site Plan – See revised drawing MS1.1. This revised drawing revises the routing path for the chilled water, steam and condensate pipes.
2. Sheet M1.1, First Floor Plan – See revised drawing M1.1. This revised drawing shows the carbon dioxide sensor locations.
3. Sheet M1.2, Second Floor Plan – See revised drawing M1.2. This revised drawing shows the carbon dioxide sensor locations.
4. Sheet M1.2, Second Floor Plan – See revised drawing M1.2. This revised drawing removes the fire dampers at the Atrium where the fire rated wall is removed.
5. Sheet M1.3, Third Floor Plan – See revised drawing M1.3. This revised drawing shows the carbon dioxide sensor locations.

6. Sheet M1.3, Third Floor Plan – See revised drawing M1.3. This revised drawing removes the fire dampers at the Atrium where the fire rated wall is removed.
7. Sheet M2.3, Third Floor Plan - Piping – See revised drawing M2.3. This revised drawing removes the fire sealed pipe penetrations at the Atrium where the fire rated wall is removed.
8. Sheet M3.1, Piping Diagrams – Steam vent from pressure reducing stations shall be 6". Vent pipe shall be routed with in piping chase with hot and chilled water up to roof.
9. Sheet M4.2, Schedules, Legend and Details – Refer to the Legend, add symbol PF to refer to a Plaster Frame.
10. Sheet M4.3, Details – Revised drawing M4.3 adds Fan Coil Piping Diagram and VAV Heating Coil Piping Diagram.

Prior Approvals

Additional Acceptable Manufacturers: The following is a list of manufacturers that are approved for this project providing they can comply with the specifications and are of equal or greater quality, and function and perform like the specified products: (Note: inclusion to the list of acceptable manufacturers does not eliminate the necessity to comply with specifications. Non-compliant products will be rejected regardless of manufacturer being listed.)

	Description	Manufacturer(s)
1.	Variable Frequency Drives	ABB, Square D, Yaskawa
2.	Ductless Split Heat Pumps	Samsung
3.	Variable Air Volume Boxes	Metal Aire
4.	Fans	American Coolair/ILG
5.	Hot Water Converters	Thermaflo Engineering
6.	Condensate Units	Thermaflo Engineering
7.	Steam Pressure Reducing Station	James M Pleasants, Heat Transfer Sales, Thermaflo Engineering
8.	Fan Coil Units	Rittling
9.	Electric Unit Heaters	Carrier Air Conditioning Company, The Trane Company, McQuay International, Markel Products Company, Electromode, Berko, Inc., Q-Mark, Raywall, Redd-I, Indeeco
10.	Pumps and Accessories	Patterson, Peerless
11.	Air and Sediment Separator	Spirotherm, B&G, Taco

V. ELECTRICAL

Drawings

1. Sheet E0.1 – In the Lighting Fixture Schedule make the following modifications to the basis of design information.
   a) Fixture Types A, AE, B, & BE are not required to be a wide-grid type fixture. Provide a standard specification grade fixture with the same attributes and components.
   b) Fixture Type EM: In Lamp Column, change LED included to Halogen Included.
   c) Fixture Type F & FE: In Lamp Column, change delivered lumen output to 1300.
   d) Fixture Type F & FE: Delete requirement for DMX dimming ballast. Provide standard 0-10V dimming ballast with 10%-100% dimming range.
   e) Fixture Type PE: Delete requirement for DMX dimming ballast. Dimming is not required for this fixture.

2. Sheets E1.1, E1.2, E1.3, and E4.2 – Change all references to A/V wall box mounted behind flat panel TV's throughout the project from chief model #: PAC516 to chief model # PAC526.
3. Sheets E1.2, E1.3, and E4.2 – All multi-service floor boxes on 2nd and 3rd floors shall be changed to multi-service fire rated poke-thru's (wiremold #8atcp or equal) with two duplex receptacles, and 3-gangs for network and a/v systems. Provide three 1-1/4" raceways from network & a/v system gangs to a 12"x12" pull box mounted adjacent to each poke-thru provide raceways as shown in a/v details from pull box to support a/v and network systems.

Prior Approvals

Additional Acceptable Manufacturers: The following is a list of manufacturers that are approved for this project providing they can comply with the specifications and are of equal or greater quality, and function and perform like the specified products: (Note: inclusion to the list of acceptable manufacturers does not eliminate the necessity to comply with specifications. Non-compliant products will be rejected regardless of manufacturer being listed.)

	Description	Manufacturer(s)
1.	Lighting Fixture Type A	Lithonia, Columbia
2.	Lighting Fixture Type AE	Lithonia, Columbia
3.	Lighting Fixture Type B	Lithonia, Columbia
4.	Lighting Fixture Type BE	Lithonia, Columbia
5.	Lighting Fixture Type CE	Lithonia, Columbia
6.	Lighting Fixture Type D	Lithonia, Columbia
7.	Lighting Fixture Type E	Lithonia, Columbia
8.	Lighting Fixture Type EE	Lithonia, Columbia
9.	Lighting Fixture Type EM	Lithonia, Dual-Lite
10.	Lighting Fixture Type F	Gotham, Liton, Prescolite
11.	Lighting Fixture Type FE	Gotham, Liton, Prescolite
12.	Lighting Fixture Type G	Peerless
13.	Lighting Fixture Type H	SPI Lighting, Prudential
14.	Lighting Fixture Type K	Spectrum Lighting
15.	Lighting Fixture Type LE	Lithonia, Luminaire
16.	Lighting Fixture Type M	G-Lighting, Bega
17.	Lighting Fixture Type ME	G-Lighting, Bega
18.	Lighting Fixture Type N	Finelite, Alights
19.	Lighting Fixture Type PE	Gotham, Liton
20.	Lighting Fixture Type RE	Newstar, Luminaire
21.	Lighting Fixture Type S	Lithonia, Columbia
22.	Lighting Fixture Type SE	Lithonia, Columbia
23.	Lighting Fixture Type TE	Eureka, Visa
24.	Lighting Fixture Type V	Lithonia, Columbia
25.	Lighting Fixture Type VE	Lithonia, Columbia
26.	Lighting Fixture Type W	Lithonia, Columbia
27.	Lighting Fixture Type X	Lithonia, Dual-Lite
28.	Cable Tray	Cablofil

VI. HAZARDOUS MATERIALS ABATEMENT

Specifications

1. 02080 – Asbestos: Delete paragraphs 1.3.H.3.c, 1.3.H.3.d, 1.3.I.2.c, and 1.3.I.2.d.
2. 02080 – Asbestos: Replace paragraph 1.3.I.1.g with the following: ”Suspended Ceiling Grid Perimeter Tracking from ACM Joint Compound and Associated Non-ACM Drywall Walls (1,000 L.F.)”
3. 02080 – Asbestos: Replace the first paragraph of 1.5.A.7 with the following: “All suspended ceiling panels and select portions of perimeter tracking are to be removed from the Pickens wing. In some areas, the perimeter track of the suspended ceiling grids are secured to non-ACM drywall that have ACM joint compound. As a component of this abatement, Contractor shall closely coordinate with GC to determine exact locations of perimeter tracking to be removed. Contractor is also to be aware that the walls, decorative moulding, doorframes, etc. in the Pickens wing are coated with LBP. Contractor shall review requirements for handling building components coated with LBP and incorporate appropriate work practices (i.e. PPE) to minimize worker exposure to airborne LBP concentrations where tracking is to be removed.”
4. 02080 – Asbestos: Replace the third paragraph of 1.5.A.7, with the following: “Following removal of ceiling tiles, Contractor shall remove all interior suspended ceiling grid up to perimeter tracking. Interior grid shall be removed without damage to perimeter tracking and associated grid. Prior to removal of perimeter tracking in areas designated on the abatement documents and agreed upon by the GC and Contractor, Contractor shall place a sufficient quantity of 6-mil poly to reach at least three (3) feet back from the wall, three (3) feet to either side of the impacted area, and adhered at least six (6) inches up the wall.”
5. 02080 – Asbestos: Add the following sentence to the end of the last paragraph in 1.5.A.7: “GC shall ensure that all workers installing components on the non-ACM drywall walls with ACM joint compound are properly trained to handle ACM and LBP, and that all appropriate PPE are utilized during these tasks.”
6. 02080 – Asbestos: Replace paragraph 1.5.B.2 with the following:
    1. ACM and/ or LBP-contaminated debris on grassed soils and hard surfaces

       Contractor shall remove from exterior grassed areas, landscaped areas and hard surfaces all ACM and LBP debris within the limits as shown on the drawings. Contractor shall continue until no visible debris are present or to the satisfaction of the Owner’s Representative. All debris shall be handled and disposed of as ACM waste.
7. 02080 – Asbestos: Delete paragraph 1.6.C. Replace with the following:

    C. GC is to be aware that concrete walls, columns and arched structural beams found throughout the gymnasium area are coated with LBP. In some areas, where LBP is found but is not to be abated, areas of flaking LBP were noted on the wall surfaces. GC is to coordinate with Contractor regarding removal of flaking, peeling paint in this area prior to start of construction/ renovation activities in this area, to include the installation of anchors for and the application of shotcrete. All areas to be impacted by the shotcrete operations shall be inspected by the GC and Contractor to determine the extent of the peeling paint conditions. Contractor shall utilize appropriate work practices to perform the loose paint removal, and shall containerize and dispose of debris generated during this task to be turned over to USC HAZMAT for disposal as LBP waste.

    GC shall utilize means, methods and workers properly trained to handle LBP during the installation of wall anchors and while making other mechanical connections associated with the proposed shotcrete wall. GC shall take into account and meet all regulatory requirements for worker protection (OSHA) and disposal (SCDHEC). Prior to start of anchor installation, GC shall provide or develop a NEA for performing this task.

Furthermore, the impact from initial shotcrete application has the potential for disturbing LBP that is to be encapsulated behind the shotcrete wall. For this reason, GC shall coordinate with shotcrete contractor to ensure that personnel performing this work have the appropriate training to work with LBP and are wearing appropriate PPE. Prior to start of shotcrete application, GC shall provide or develop a NEA for performing this task. GC shall also be aware that there is a potential for lead contamination of the shotcrete waste due to flaking paint in this area. If excess LBP chips and debris are observed in the shotcrete waste material, the entire shotcrete waste pile may require disposal as a hazardous material as determined by TCLP testing methods.

8. 02080 – Asbestos: Add the following paragraph to 1.6.F, Pendleton (West) Wing:
    9. Removal of loose paint from the walls that are going to be covered in shotcrete. GC and Contractor shall inspect the affected walls and determine the areas to be impacted. This task is intended to reduce the amount of LBP chips and debris that may be generated during the shotcrete application; it is not intended to be a complete abatement of LBP from the affected areas. Furthermore, GC is to be aware that this task is also intended to reduce the quantity of LBP debris that may contaminate shotcrete waste during the application process. (Est. 1,500 S.F. total)
9. 02080 – Asbestos: Delete paragraph 1.6.E (p 12). Replace with the following: “Prior to commencement of LBP abatement and window removal, Contractor shall ensure that visible existing ACM window glazing debris and LBP chips and debris are removed from grassed and hard surfaced areas around the building perimeter. Contractor shall coordinate with Owner and/ or Owner’s Representative to confirm the clean-up prior to performing exterior abatement tasks.”
10. 02080 – Asbestos: Delete paragraphs 1.19.B.3.a.i, 1.19.B.3.a.ii, and 1.19.B.3.a.iii. Replace with the following:
    i. Objective data demonstrating that the product or materials containing asbestos minerals or lead-based paint or the activity involving such product or material cannot release airborne asbestos fibers or lead-contaminated dust in concentrations exceeding the TWA and excursion limit under those work conditions having the greatest potential for release asbestos or lead-based paint; or
    ii. Where the Contractor has monitored prior asbestos and lead-based paint jobs for the PEL and the excursion limit within 12 months of the current or projected job, the monitoring and analysis were performed in compliance with CFR 29 Part 1926.1101; and the data were obtained during work operations conducted under workplace conditions “closely resembling” the processes, type of material, control methods, work practices, and environmental conditions used and prevailing in the Contractor’s current operations, the operations were conducted by employees whose training and experience were no more extensive than that of employees performing the current job, and these data show that under the conditions prevailing and which will prevail in the current workplace there is a high degree of certainty that employee exposures will not exceed the TWA and excursion limit; or
    iii. The results of initial exposure monitoring of the current job made from breathing zone samples that are representative of the 8-hour TWA and 30-minute short-term exposures of each employee covering the operations that are most likely during the performance of the entire asbestos or lead-based paint job to result in exposures over the PELs.

Drawings

1. Sheets AB-1, AB-2, AB-3, LBP-1, LBP-2, and LBP-3: Replace drawings with attached revised drawings.

Prior Approvals

Additional Acceptable Manufacturers: The following is a list of manufacturers that are approved for this project providing they can comply with the specifications and are of equal or greater quality, and function and perform like the specified products: (Note: inclusion to the list of acceptable manufacturers does not eliminate the necessity to comply with specifications. Non-compliant products will be rejected regardless of manufacturer being listed.)

	Description	Manufacturer (Product)
1.	Nu-Age 6/10 Polyethylene Sheet	Nu-Age Films

END OF ADDENDUM

SECTION 085123 – STEEL WINDOW REPAIR AND RESTORATION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes providing labor and materials to repair/ restore and fix closed the existing operable and fixed steel windows. Windows include commercial steel window units with single and double casements. Completed work shall meet or exceed performance and appearance of original installation. Work includes, but is not limited to,

1. Making all necessary provisions, including window encapsulation prior to removing windows, to prevent any asbestos that may be in existing glazing compound from becoming airborne or otherwise spreading from contained glazing compound.
2. Stripping, sandblasting, and refinishing existing windows.
3. Reglaze existing windows.
4. Repairing and or replacing broken and missing hardware.
5. Replacing broken glass to match existing.
6. Testing repaired and restored windows.
7. Restoration work for all windows identified to be “refurbished” on Drawings.

B. Related Sections: The following sections contain requirements that relate to this Section:

1. Division 07 Section “Joint Sealants” for sealing between windows and adjacent materials.
2. Division 08 Section “Glazing for glazing requirements.
3. Division 09 Section “Painting” for field priming and painting procedures.
4. Appendix A - USC's Asbestos and Lead Paint Abatement Survey and Abatement Documents

1.2 RELATED DOCUMENTS

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

B. National Park Service Preservation Brief 13 The Repair of Historic Steel Windows.

1.3 SUBMITTALS

A. General: Submit the following in accordance with Conditions of the Contract and Division 1 Specifications Sections.

1. Product data for each type of window required, including:
    a. Repair and restoration detail methods.
    b. Profiles and dimensions of individual new and existing components.
    c. Data on new hardware, accessories, and finishes.
    d. Recommendations for maintenance and cleaning of exterior surfaces.

2. Shop drawings for each type of window are required. Include information not fully detailed in manufacturer's standard product data and the following:
    a. Layout and removal and reinstallation details, including anchors.
    b. Show hardware, including operators that are to be repaired or replaced.
    c. Accessories.
    d. Glazing details.
3. Samples for Verification Purposes: The Architect reserves the right to require additional samples that show repair and restoration techniques and workmanship, and design of hardware and accessories.
    a. Submit a sample of glazing system to be used.
4. Qualification Statement: Restorer qualifications, including previous projects.
5. Submit a restoration and repair schedule for each window based on the results of the inspection described in Part 3 of the specification.

B. Where the finish is to be restored, provide samples of each type and color of proposed finish. Where finishes involve normal color variations, include Sample sets showing the full range of variations expected.

C. Asbestos: Submit a detailed plan on materials, methods, and procedures to be used to prevent any asbestos in the glazing compound form spreading beyond the glazing compound. In addition, provide proof of qualification to handle asbestos containing material including current certificates of training.

D. LEED Submittal:

1. Credit IEQ 4.1: Credit IEQ 4.2: Product data for paints, coatings, sealants and adhesives used inside the weatherproofing system indicating VOC content of each product used.
    a. For field applications that are inside the weatherproofing system, paints and coatings shall comply with VOC content limits when calculated according to 40 CFR 59, Subpart D (EPA Method 24) and as defined in LEED Section 018113.

1.4 QUALITY ASSURANCE

A. Window restoration contractor shall have a minimum of 5 years' experience in removing, refurbishing, resorting, repairing and reinstalling historic steel windows. Experience shall include projects of comparable size and complexity. The General Contractor shall contract with a steel window restoration specialist that meets those qualifications.

1. Window restoration contractor shall be experienced in all necessary procedures, including window encapsulation prior to removal, required to prevent the spread of asbestos in glazing compounds.

B. List three of more projects of similar nature and scope tot eh is project that the window restoration subcontractor has completed within the past five years. These projects should include: Project Name, Location, Year, Cost, and Owner Name/ Phone No.

C. Standards: All work must comply with the National Park Service Document-Preservation Brief 13 – The Repair of Historic Steel Windows.

D. Mockups:

1. Repair/ Restoration Mockup: Prior to beginning restoration of windows, use one of the windows to be restored/ repaired to prepare a full size mockup to demonstrate aesthetic effects as well as other qualities of materials, workmanship, and aesthetics. The Architect will select the window to be used as a mockup. Prepare mockup to comply with the following requirements, using each type of specified materials, procedures, and workmanship to be used for other windows to be repaired/ restored.

   a. Notify Architect one week in advance of the dates and times when mockup will be ready. Criteria for evaluating mockup includes, but is not limited, to the following:
      1) Refinishing
      2) Reglazing
      3) Hardware replacement
      4) General repairs
      5) Component-to-component fit
      6) Other criteria determined unacceptable

   b. Portions of mockup that are not acceptable to the Architect will be corrected to meet criteria established by the Architect and the Contract Documents.

   c. Retain, maintain, and protect approved mockup during construction in an undisturbed condition as a standard for judging the completed Work by the Architect. When directed by the Architect, approved repair/ restoration mockup will be the reinstallation mockup and become a part of the completed work.
      1) Acceptance of mockup is for workmanship, matching existing, maintaining original intent of window design, operation, color, gloss, texture, grooving, aesthetic qualities of workmanship; and other material and construction qualities specifically determined by the Architect.
      2) Acceptance of mockups does not constitute approval of deviations from the Contract Documents contained in mockups, unless such deviations are specifically approved by Architect in writing.
      3) Completed work will be compared with approved sample for compliance with the Contract Documents and acceptance.

1.5 PROJECT CONDITIONS

A. Field Measurements: Check actual window openings by accurate field measurement before repair and restoration. Show recorded measurements on shop drawings. Coordinate repair and restoration schedule with construction progress to avoid delay of the work.

1. Where necessary, proceed with repair and restoration without field measurements, and coordinate repair and restoration tolerances to ensure proper fit of window units.

B. Lead Paint Abatement: Existing windows and casings are known to contain lead paint. Window restoration subcontractor is to comply with recommendations in Appendix A " USC's Asbestos and Lead Paint Abatement Survey and Abatement Documents" for abatement and disposal of lead paint. Window restoration subcontractor is to be responsible for abating the materials on the sashes of windows only, and must comply with the regulation requirements of Appendix A in their entirety. Abatement contractor will be responsible for lead paint abatement on the window frames (jamb, head, and sill).

C. Asbestos Abatement: Existing window glazing compound contains asbestos. Window restoration subcontractor is to comply with recommendations in Appendix A " USC's Asbestos and Lead Paint Abatement Survey and Abatement Documents" for abatement and disposal of asbestos. Window restoration subcontractor is to be responsible for abating the materials on the sashes of windows only, and must comply with the regulation requirements of Appendix A in their entirety. Abatement contractor will be responsible for asbestos abatement on the window frames (jamb, head, and sill).

1.6 PRODUCE STORAGE AND HANDLING

A. Store removed windows and window components in a safe, dry, and protected location to prevent damage from weather, vandalism, and work from other trades.

B. Store in an upright positions on pallets, wood slats or on dry floor in a manner that will prevent damage. Cover windows to prevent dirt settlement. Ventilate cover to prevent condensation.

C. Handle and carry units to prevent distortion, bending, or breakage of glass or framing.

1.7 WARRANTY

A. Steel Window Warranty: Submit a written warranty, executed by the window restoration specialist agreeing to repair or replace window units that fail in materials or workmanship within the specified warranty period. Failures include, but are not necessarily limited to, the following:

1. Structural failures including excessive deflection, excessive leakage or air infiltration.
2. Faulty operation of ventilators and hardware.
3. Deterioration of metals, gasketing, metal finishes and other materials beyond normal weathering.
4. Peeling, cracking, flaking, blistering, or other forms of delamination of paint.
5. Adhesion, adhesive or cohesive failure of adhesives.

B. Warranty Period: 1 year after the date of Substantial Completion.

C. The warranty shall not deprive the Owner of other rights or remedies that the Owner may have under other provisions of the Contract Documents and is in addition to and runs concurrent with other warranties made by the Contractor under requirements of the Contract Documents.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Paint: By Sherwin Williams Company or equal

1. Primer: Macropoxy 646 parts A and B
2. Finish: High solids Polyurethane 2 part system

B. Lead-Based Paint Barrier: Where existing lead-based paint cannot be removed, notify the Architect and the environmental consultant prior to proceeding with the work. If the lead-based paint is to be encapsulated with a new finish coat, use lead barrier paints that contact the existing lead-based paints and act as an intermediate coat between the lead-based paint and the finish coat. Lead barrier paint shall be as recommended by the paint manufacturer. This barrier paint shall be acceptable to EPA, OSHA, and local governing officials for the intended purpose. Notify the Architect where specified paints are not suitable for lead-based paint top-coatings (encapsulation).

C. Steel Window Members: When restoration requires replacement of metal, provide frame and ventilator members formed from hot-rolled new billet steel sections. Size and weight of principal frame and ventilator members shall conform to the following requirements. Replacement metal shall match shape and dimensions of original and shall not alter shape, size, or profile of the original windows.

D. Trim members, including glazing beads, screen frames, retainers for weather-stripping, flashing and similar items shall be metal to match existing. Trim located entirely on the interior face of windows may be formed steel. Replacement metal shall match shape and dimensions of original and shall not alter shape, size, or profile of the original windows.

E. Fasteners: Provide bronze, brass, stainless steel or other metal fasteners warranted by the manufacturer to be noncorrosive and compatible with steel window members, trim, hardware, anchors, and other components.

1. Exposed Fasteners: If exposed fasteners are used, provide Phillips, flat-head machined screws that match the finish of the member or hardware being fastened, as appropriate.

F. Anchors, Clips and Window Accessories: Provide units of stainless steel, hot-dip zinc coated steel or iron complying with ASTM A 123, or bronze/ brass. Provide units with sufficient strength to withstand design pressure indicated.

G. Sealant For Perimeter Sealing: Provide type silicone recommended by the sealant manufacturer for joint size, movement, and substrates. Sealant shall remain permanently elastic, nonshrinking, and nonmigrating.

H. Glass and Glazing Materials: Refer to the “Glass and Glazing” sections of these specifications.

I. Filler Bondo 265 body filler or approved equal to be used to make repairs to repairable windows.

2.2 HARDWARE

A. Remove hardware at basement windows, use for repair of upper floors, and turn over remaining hardware to the owner for future use.

B. Where replacement hardware is required, provide standard nonremovable, hardware of the type used originally and that matches finish and operation of failed hardware. Hardware shall be of sufficient strength to perform the function for which it is intended.

1. Existing windows operate as push-pull. Restored windows will be inoperative.

PART 3 - EXECUTION

3.1 INSPECTION

A. Examine each window and determine the extent of restoration and repair. Determine the level of corrosion of each window, how the corrosion is to be removed and what repairs are to be made. Inspection will include an evaluation of the following and an understanding of how repairs and restoration is to be accomplished.

1. Bowing
2. Misalignment
3. Weather-stripping
4. Level of Corrosion
5. Glass to be replaced
6. What is to be restored
7. Hardware to be repaired
8. Hardware to be replaced
9. Glazing and perimeter seals
10. Hardware to be removed and not replaced
11. What is to be repaired and methods of repair

B. All repairs/ replacements must be included in the base bid.

C. Corrosion, primarily rust, one of the primary factors in steel window restoration and the presence and extent of corrosion should be evaluated before restoration begins. Basically, depending on rust penetration into the steel members, corrosion is either light, or medium or heavy.

1. Light Corrosion: When rust is a surface accumulation or light flaking with no penetration into the steel member. Usually can be scraped or rubbed off. Sometimes called rust bloom.
2. Medium Corrosion: When rust has penetrated the steel member but not all the way through and the finish has blisters that normally have not broken. An ice pick or similar sharp steel probe will penetrate the steel member. Steel members with medium corrosion may be repaired until 50% of the member needs repairs at which time the member will need to be replaced.
3. Heavy Corrosion: When rust has penetrated deeply into the steel member. Ehen tested, an ice pick or similar sharp steel probe will penetrate the steel member deeply. Heavy corrosion usually results in structural damage that must be patched or spliced. Heavily corroded members must be replaced.

3.2 WINDOW REPAIRS

A. Repair windows so that minimal damage is done to existing head, jamb or sill of the window or surrounding surfaces. Remove existing plaster by manual means only as required without damaging window frame or adjacent wall surfaces. Mechanical means of plaster removal is not acceptable. Windows irreparably damaged during repairs shall be replaced at no additional cost to the Owner. Removal of existing plaster may be required but must be held to a minimum. Cut

and grind smooth existing wall anchors. Remove all existing exterior sealant around window frames.

B. Cover the interior of the opening with 6 mil polyethylene providing an airtight seal. Carefully adhere the polyethylene to the wall so as not to damage the wall finish. Protect the interior of the building from debris during repairs.

3.3 RESTORATION

A. General: Repair and restore steel window units including metal panels to comply with contract documents, approved mockup, and indicated standards. Include a complete system for assembly of components and anchorage of window units.

1. All work must comply with the National Park Service Document-Preservation Brief 13-The Repair of Historic Steel Windows.

B. Glazing: Remove loosest missing glazing completely. Assume that all existing window glazing contains asbestos. Ensure that all existing window glazing is removed and disposed of properly.

C. Provide weep holes and internal water passages to conduct infiltrating water to the exterior.

D. Finish Stripping:

1. Strip existing rusted window finishes to bare metal making sure that the existing metal is not damaged in the process.
2. Test an inconspicuous area for metal damage form the stripping process.
3. Providing there is no damage to the metal, windows shall be chemically stripped of all existing paint, to bare metal. Some of the existing paint layers may contain lead, a substance known to be hazardous. Where lead paint is present, remove paint in a manor so that it is contained, collected, labeled, and legally disposed of in a DHEC approved fashion. Furnish the Owner with evidence of legal disposal.

E. Wire brush and/ or sand rusted areas, treat areas with rust inhibitor.

F. Restore windows to match mockup for a like new appearance. Replace metal damaged beyond repair. Once the frames are repainted, there shall be no visible evidence of joinery or repair. Treat metal panels in the same way as the window frames.

G. Reglazing: Glaze windows in situ.

H. Repair and Replacement of Hardware

1. Fix windows closed by screwing from exterior.
2. Replace damaged and missing hardware.
3. Replace missing fasteners with new to match existing. Tighten existing fasteners.

I. Refinishing: Refinish as noted in the painting division of these specifications. A minimum of three (3) coats of paint, including the primer coat, is required. Prior to painting, Architect will visually observe all frames to determine quality of repair.

1. Primer: Apply 1 coat of specified primer to a uniform dry film thickness of 4.5 mils.

a. Immediately after surface preparation, apply primer according to manufacturer's instructions. Use priming methods that result in full coverage of joints, corners, edges, and exposed surfaces.
b. Do not allow prepared and cleaned surfaces to remain unprimed over night or for longer than 8 hours before priming. Surfaces not primed within their parameters shall be recleaned prior to priming.
c. Strip paint corners, crevices, bolts, rivets, welds, and edges. Spray all rivets from at least 4 different angles. Cover all sides of rivets and bolts equally.

2. Finish: Apply 2 coats of specified finish to a uniform dry film thickness of 4.0t.

3.4 ADJUSTING

A. Adjust operating ventilators and hardware to provide a tight fit at contact points and weather-stripping, for smooth operation and a weathertight closure.

3.5 CLEANING

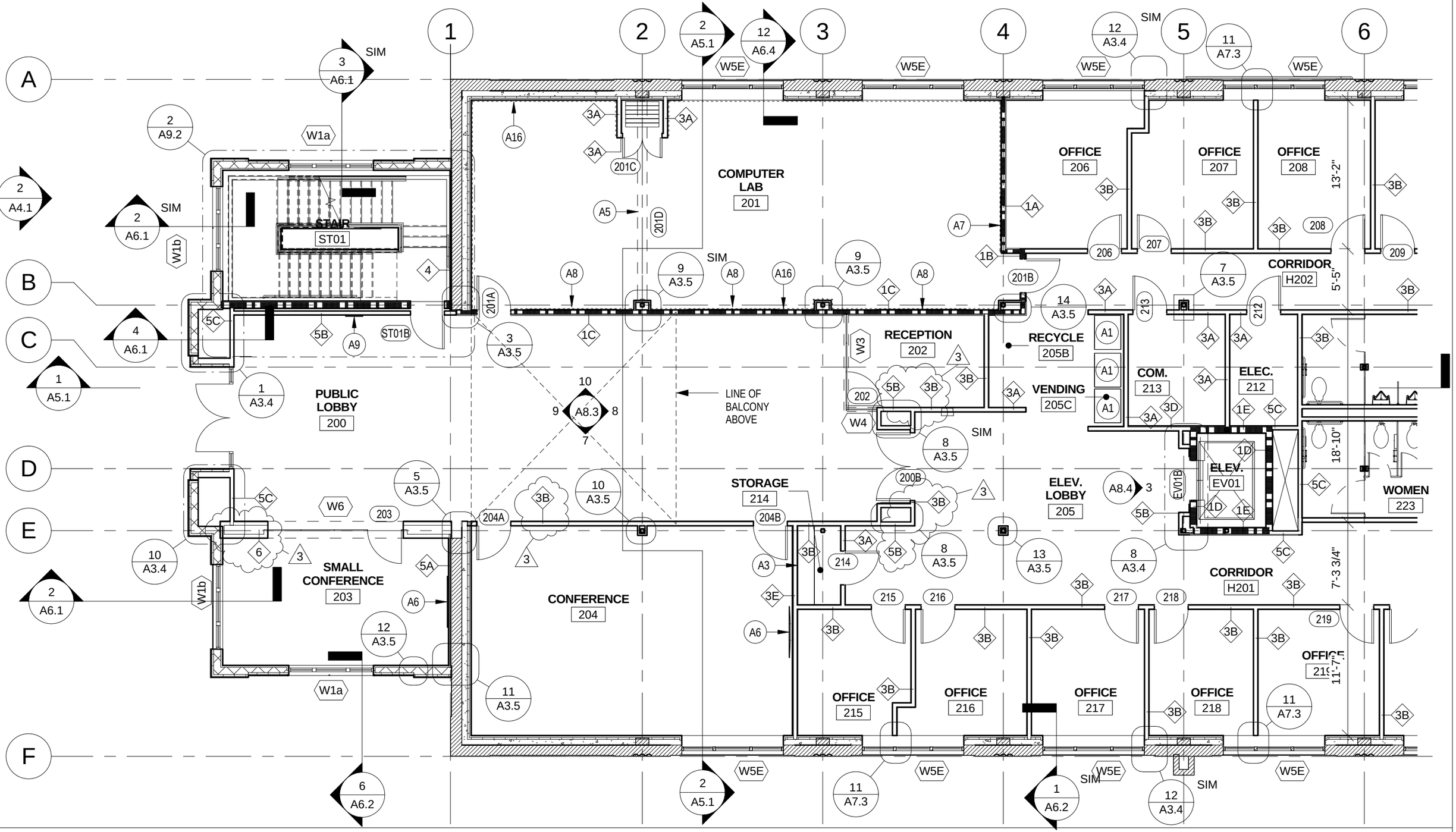
A. Clean surfaces promptly after repairs. Use cleaning materials and methods acceptable to the paint manufacturer. Exercise care to avoid damage to the finish. Remove excess glazing and sealant compounds, dirt, and other substances. Lubricate hardware and other moving parts.

B. Clean glass or preglazed units promptly after installation of windows. Comply with requirements of the

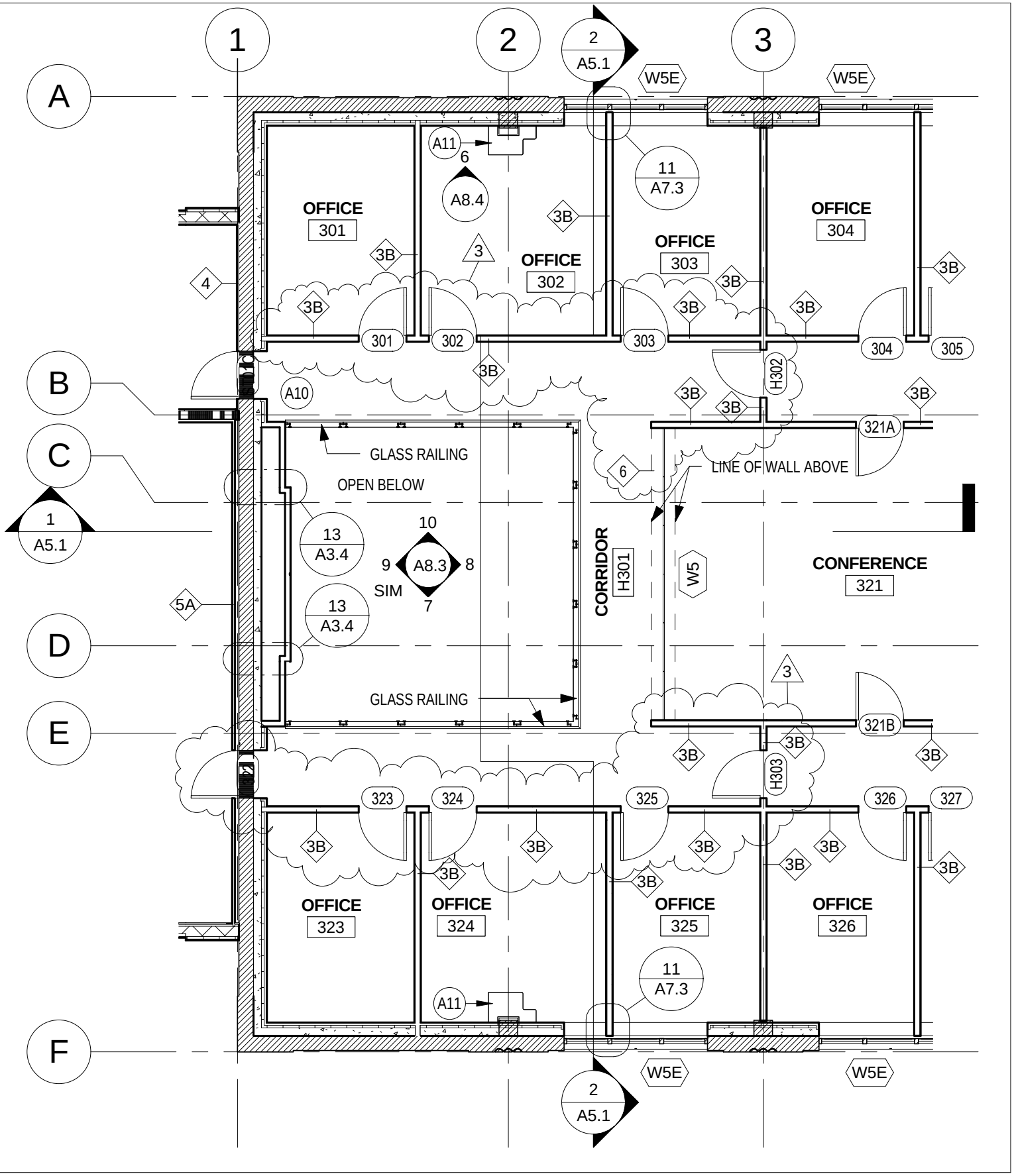
3.6 PROTECTION

A. Initiate and maintain protection and other precautions required through the remainder of the construction period, to ensure that, except for normal weathering, window units will be free of damage or deterioration at the time of Substantial Completion.

END OF SECTION 085123



PROJECT TITLE HAMILTON COLLEGE RENOVATION STATE PROJECT NUMBER: H27-9905-SG COLUMBIA, SOUTH CAROLINA	THE DRAWING AND THE DESIGN THERON ARE THE PROPERTY OF THE BOUDREAUX GROUP, INC. THE REPRODUCTION, COPYING, OR USE OF THIS DRAWING WITHOUT THE WRITTEN CONSENT OF THE BOUDREAUX GROUP, INC. IS PROHIBITED AND ANY INFRINGEMENT WILL BE SUBJECT TO LEGAL ACTION. ARCH. PROJECT NO.: U-651-07 DATE: 5/8/14	DRAWING SCALE: 1/8" = 1'-0" SHEET REFERENCE: A1.2 SKETCH NO.: **SK-A-05**	A/E SEAL	A/E SEAL	The Boudreaux Group 1330 Lady St., Suite 500 (29201) P.O. Box 5695 Columbia, SC 29250 803 799 0247 p 803 771 6844 f info@boudreauxgroup.com Interdisciplinary Design Architecture Interiors Planning



The Boudreaux Group

Interdisciplinary Design Architecture Interiors Planning

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

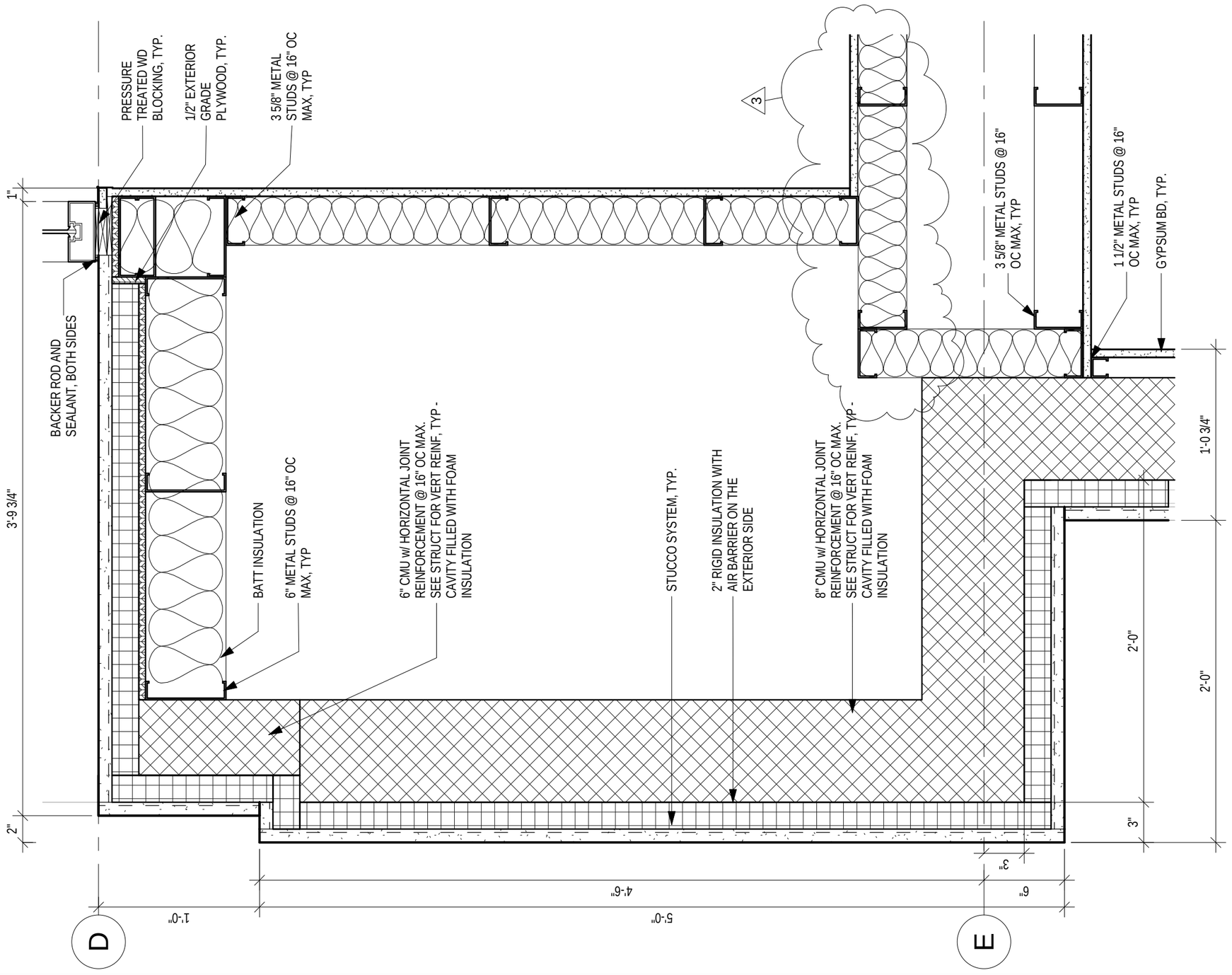
SHEET REFERENCE(S)
A1.3

PROJECT TITLE
HAMILTON COLLEGE RENOVATION
STATE PROJECT NUMBER: H27-9905-SG
COLUMBIA, SOUTH CAROLINA

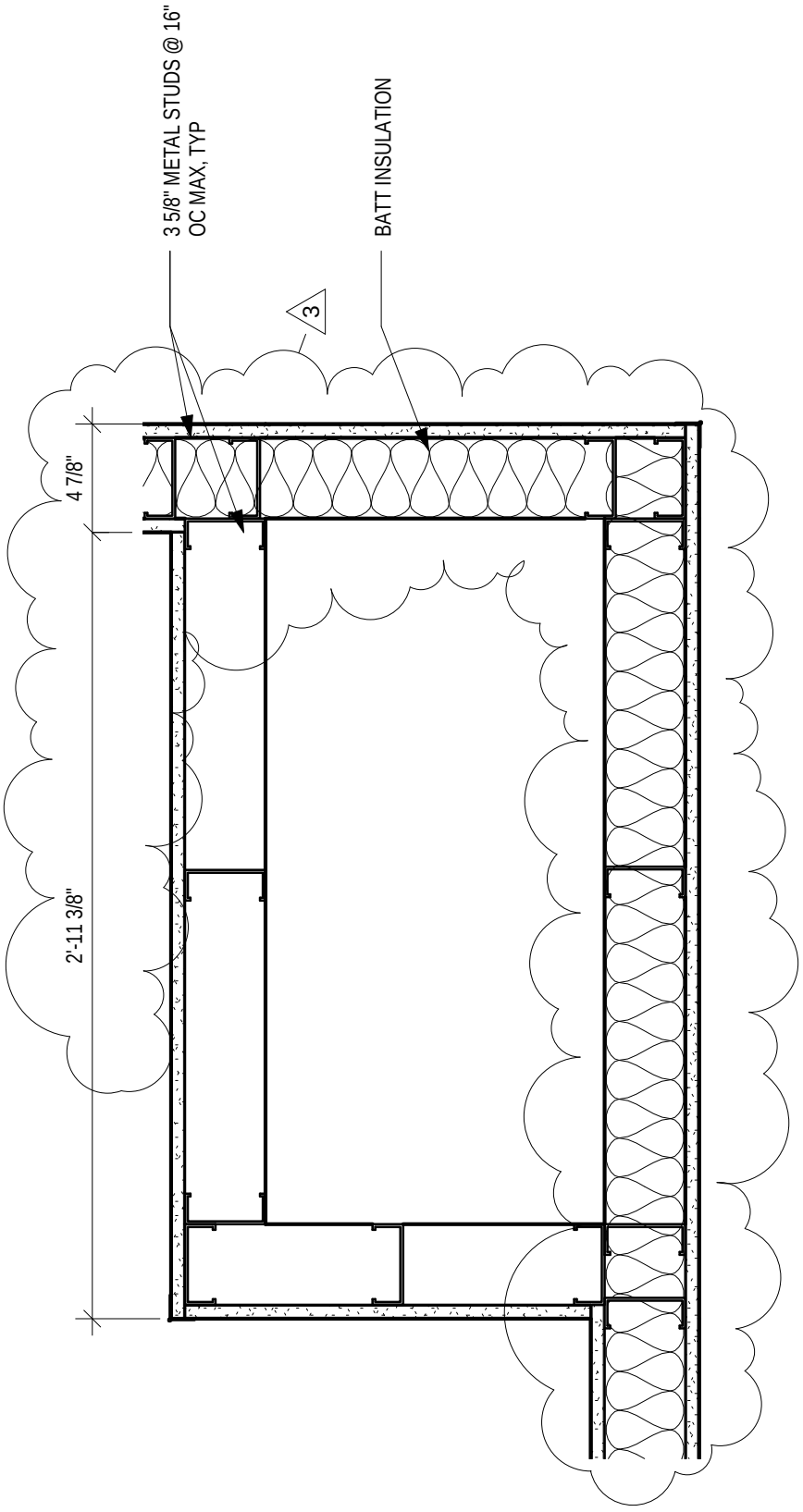
ARCH. PROJECT NO.
U-651-07

DATE
5/8/14

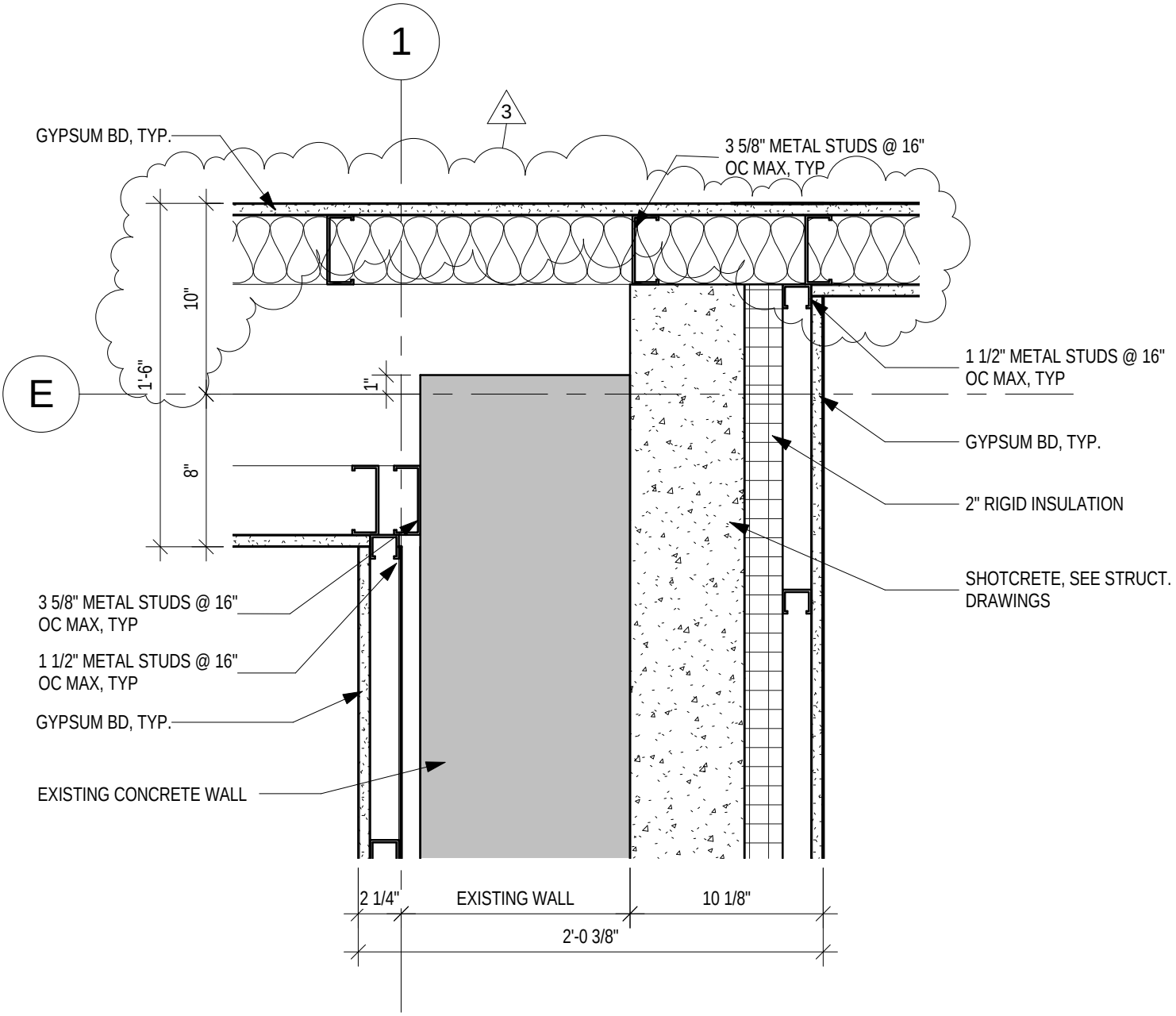
SKETCH NO.
SK-A-06



PROJECT TITLE HAMILTON COLLEGE RENOVATION STATE PROJECT NUMBER: H27-9905-SG COLUMBIA, SOUTH CAROLINA	THE DRAWING AND THE DESIGN THERON ARE THE PROPERTY OF THE BOUDREAUX GROUP, INC. THE REPRODUCTION, COPYING, OR USE OF THIS DRAWING WITHOUT THE WRITTEN CONSENT OF THE BOUDREAUX GROUP, INC. IS PROHIBITED AND ANY INFRINGEMENT WILL BE SUBJECT TO LEGAL ACTION. ARCH. PROJECT NO.: U-651-07 DATE: 5/8/14	DRAWING SCALE: 1 1/2" = 1'-0" SHEET REFERENCE: 10A3.4 SKETCH NO.: **SK-A-07**	A/E SEAL	A/E SEAL	The Boudreaux Group 1330 Lady St., Suite 500 (29201) P.O. Box 5695 Columbia, SC 29250 803 799 0247 p 803 771 6844 f info@boudreauxgroup.com Interdisciplinary Design Architecture Interiors Planning



The Boudreaux Group Interdisciplinary Design Architecture Interiors Planning	THE DRAWING AND THE DESIGN THERON ARE THE PROPERTY OF THE BOUDREAUX GROUP, INC. THE REPRODUCTION, COPYING, OR USE OF THIS DRAWING WITHOUT THE WRITTEN CONSENT OF THE BOUDREAUX GROUP, INC. IS PROHIBITED AND ANY INFRINGEMENT WILL BE SUBJECT TO LEGAL ACTION.		DRAWING SCALE 1 1/2" = 1'-0" SHEET REFERENCE(S) 8A3.5
PROJECT TITLE **HAMILTON COLLEGE RENOVATION** STATE PROJECT NUMBER: H27-9905-SG COLUMBIA, SOUTH CAROLINA	ARCH. PROJECT NO. U-651-07	DATE 5/8/14	SKETCH NO. **SK-A-08**



The Boudreaux Group
Interdisciplinary Design Architecture Interiors Planning

DRAWING SCALE
1 1/2" = 1'-0"

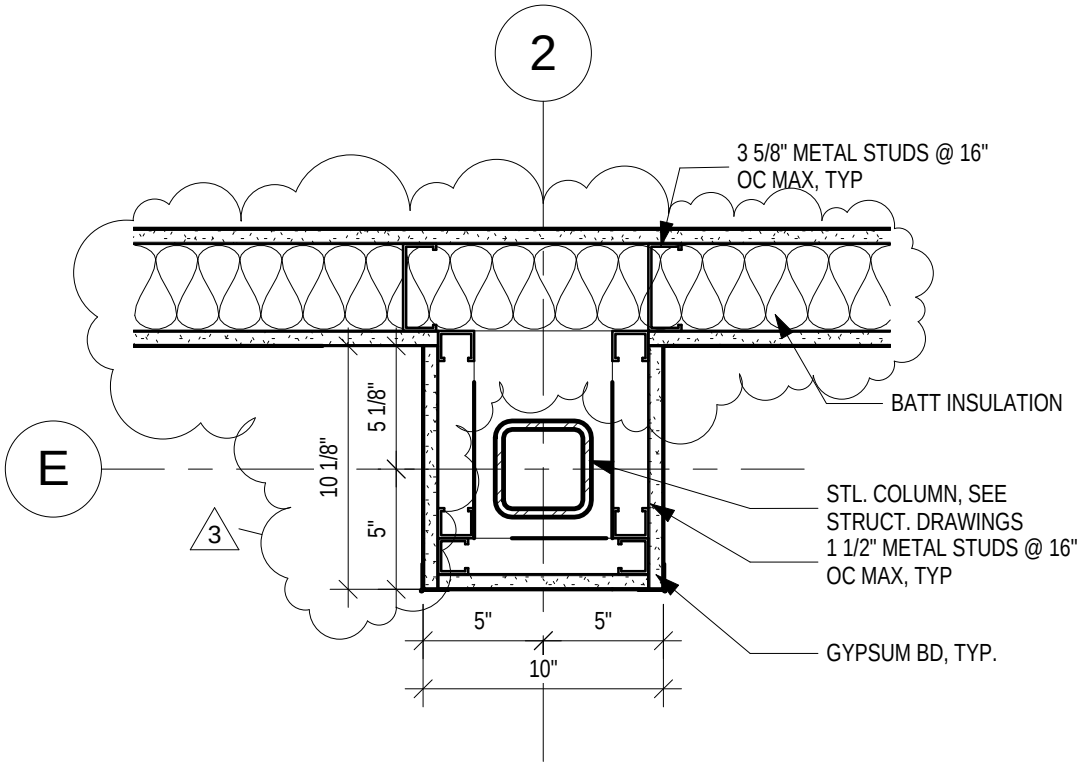
SHEET REFERENCE(S)
5A3.5

PROJECT TITLE
HAMILTON COLLEGE RENOVATION
STATE PROJECT NUMBER: H27-9905-SG
COLUMBIA, SOUTH CAROLINA

ARCH. PROJECT NO.
U-651-07

DATE
5/8/14

SKETCH NO.
SK-A-09



The Boudreaux Group
Interdisciplinary Design Architecture Interiors Planning

DRAWING SCALE
1 1/2" = 1'-0"

SHEET REFERENCE(S)
10A3.5

PROJECT TITLE
HAMILTON COLLEGE RENOVATION
STATE PROJECT NUMBER: H27-9905-SG
COLUMBIA, SOUTH CAROLINA

ARCH. PROJECT NO.
U-651-07

DATE
5/8/14

SKETCH NO.
SK-A-10

WINDOW					FRAME				FIRE RATING	HDWR	REMARKS
DOOR NO.	SIZE WIDTH	SIZE HEIGHT	TYPE	GLAZING TYPE	TYPE	HEAD	JAMB	SILL			
SECOND FLOOR											
200B	6' - 0"	7' - 0"	D4		F1	5/A7.5	6/A7.5			26	
204A	3' - 0"	7' - 0"	D3	G6	F1	5/A7.5	6/A7.5			31	
204B	3' - 0"	7' - 0"	D3	G6	F1	5/A7.5	6/A7.5			31	
THIRD FLOOR											
301	3' - 0"	7' - 0"	D3	G6	F1	5/A7.5	6/A7.5			4	PROVIDE PRIVACY FILM ON INTERIOR SIDE OF GLASS
302	3' - 0"	7' - 0"	D3	G6	F1	5/A7.5	6/A7.5			4	PROVIDE PRIVACY FILM ON INTERIOR SIDE OF GLASS
303	3' - 0"	7' - 0"	D3	G6	F1	5/A7.5	6/A7.5			4	PROVIDE PRIVACY FILM ON INTERIOR SIDE OF GLASS
323	3' - 0"	7' - 0"	D3	G6	F1	5/A7.5	6/A7.5			4	PROVIDE PRIVACY FILM ON INTERIOR SIDE OF GLASS
324	3' - 0"	7' - 0"	D3	G6	F1	5/A7.5	6/A7.5			4	PROVIDE PRIVACY FILM ON INTERIOR SIDE OF GLASS
325	3' - 0"	7' - 0"	D3	G6	F1	5/A7.5	6/A7.5			4	PROVIDE PRIVACY FILM ON INTERIOR SIDE OF GLASS
H302	3' - 0"	7' - 0"	D1		F1	5/A7.5	6/A7.5			23	
H303	3' - 0"	7' - 0"	D1		F1	5/A7.5	6/A7.5			23	

3

3

PROJECT TITLE
HAMILTON COLLEGE RENOVATION
STATE PROJECT NUMBER: H27-9905-SG
COLUMBIA, SOUTH CAROLINA

ARCH. PROJECT NO.
U-651-07

DATE
5/8/14

DRAWING SCALE

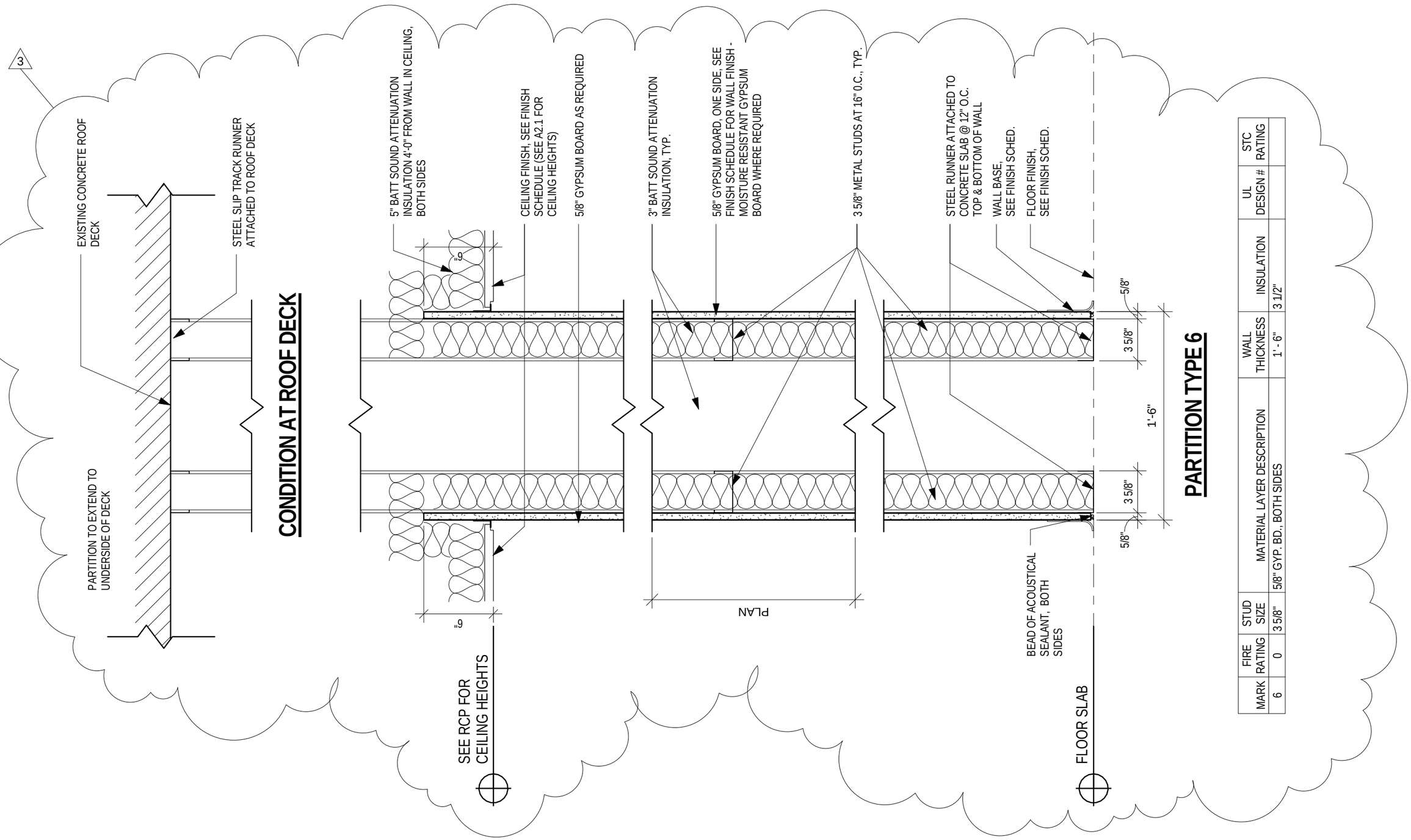
SHEET REFERENCE
A7.1 DOOR AND FRAME SCHEDULE

SKETCH NO.
SK-A-11

A/E SEAL

A/E SEAL

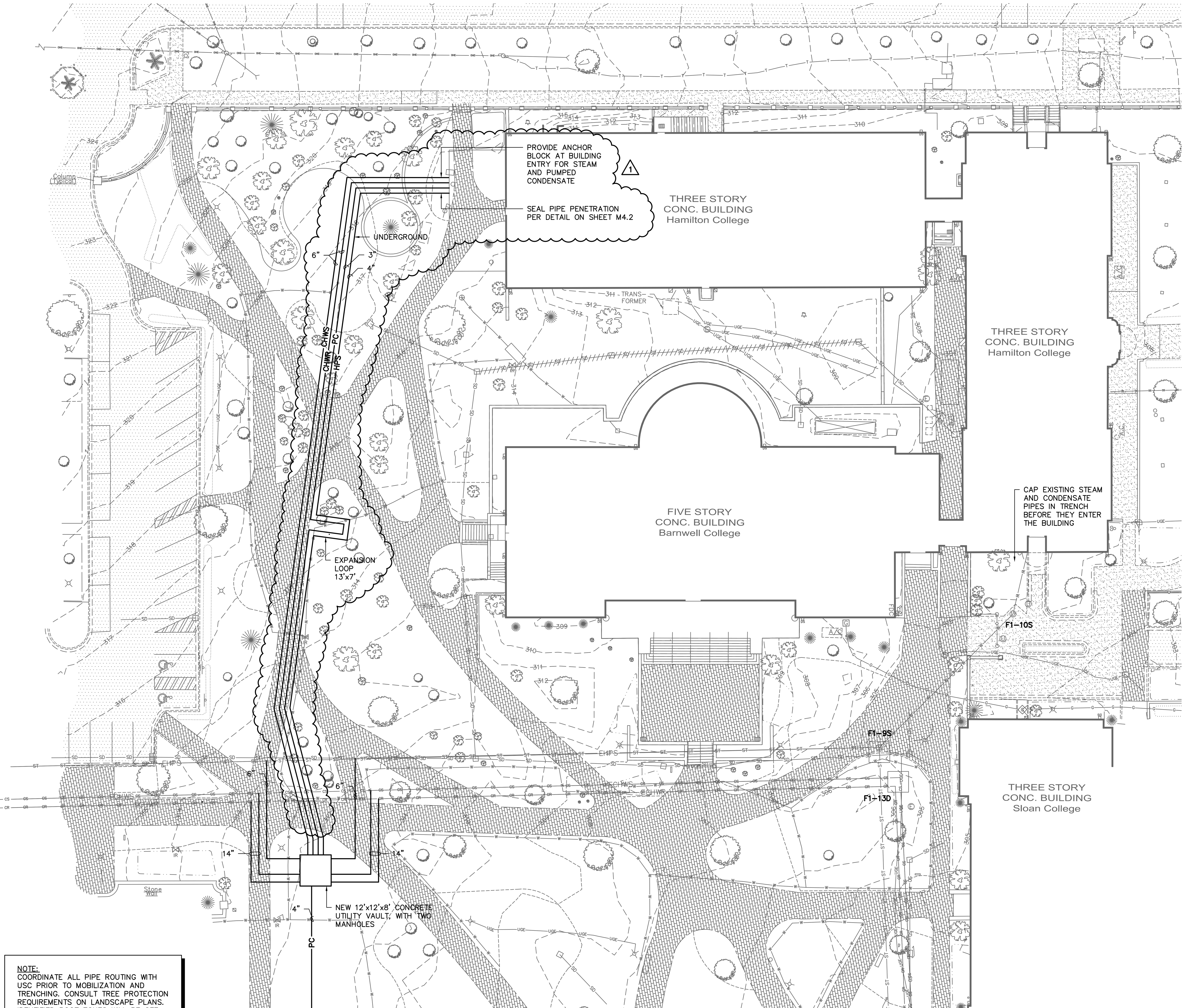
The Boudreaux Group
1330 Lady St., Suite 500 (29201)
P.O. Box 5695
Columbia, SC 29250
803 799 0247 p
803 771 6844 f
info@boudreauxgroup.com
Interdisciplinary Design Architecture Interiors Planning



PARTITION TYPE 6

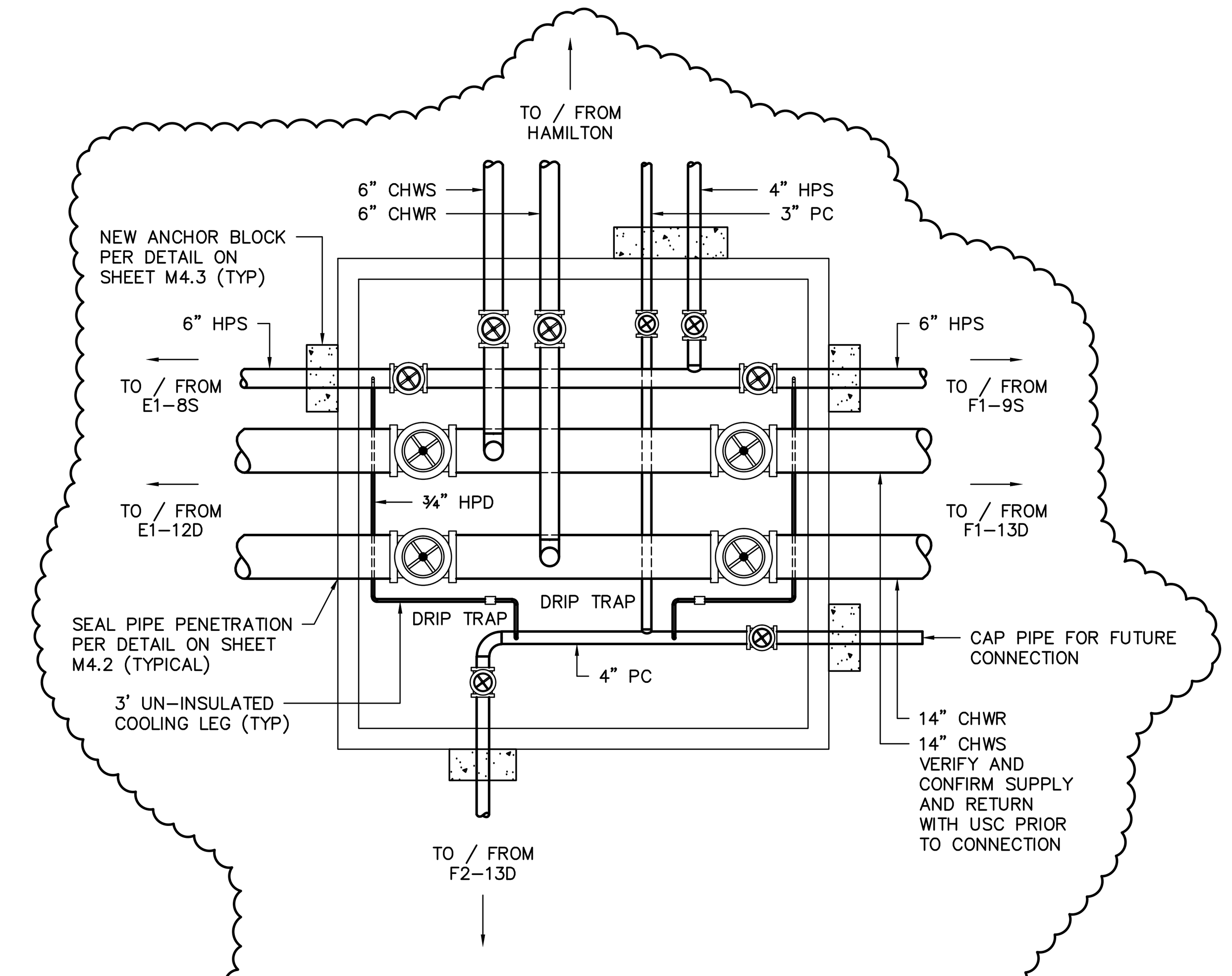
MARK	FIRE RATING	STUD SIZE	MATERIAL LAYER DESCRIPTION	WALL THICKNESS	INSULATION	UL DESIGN #	STC RATING
6	0	3 5/8"	5/8" GYP. BD., BOTH SIDES	1' - 6"	3 1/2"		

PROJECT TITLE HAMILTON COLLEGE RENOVATION STATE PROJECT NUMBER: H27-9905-SG COLUMBIA, SOUTH CAROLINA	 ARCH. PROJECT NO.: U-651-07 DATE: 5/8/14	DRAWING SCALE: 1 1/2" = 1'-0" SHEET REFERENCE: A3.4 SKETCH NO.: **SK-A-12**	A/E SEAL	A/E SEAL	The Boudreaux Group 1330 Lady St., Suite 500 (29201) P.O. Box 5695 Columbia, SC 29250 803 799 0247 p 803 771 6844 f info@boudreauxgroup.com Interdisciplinary Design Architecture Interiors Planning



NOTE:
COORDINATE ALL PIPE ROUTING WITH USC PRIOR TO MOBILIZATION AND TRENCHING. CONSULT TREE PROTECTION REQUIREMENTS ON LANDSCAPE PLANS. IDENTIFIED ROOT ZONES WILL BE OFF LIMITS TO MACHINERY AND TRAFFIC DURING CONSTRUCTION.

1 MS-1.1 SITE PLAN – RENOVATION
SCALE: 1" = 20'



1 2 MS1.1 NEW UTILITY VAULT
NO SCALE

N:\PROJECTS\12660\DRAWINGS\HVAC\12660-MS1_1.dwg

The Boudreaux Group
The Boudreaux Group, Inc.
1330 Lady St., Suite 500 (29201)
P.O. Box 5695
Columbia, SC 29250
803 799 0247 p
803 771 6844 f
info@boudreauxgroup.com
Interdisciplinary Design Architecture Interiors Planning

A/E Seal

A/E Seal

UNIVERSITY OF SOUTH CAROLINA

HAMILTON COLLEGE RENOVATION

STATE PROJECT NUMBER: H27-9905-SG
COLUMBIA, SOUTH CAROLINA

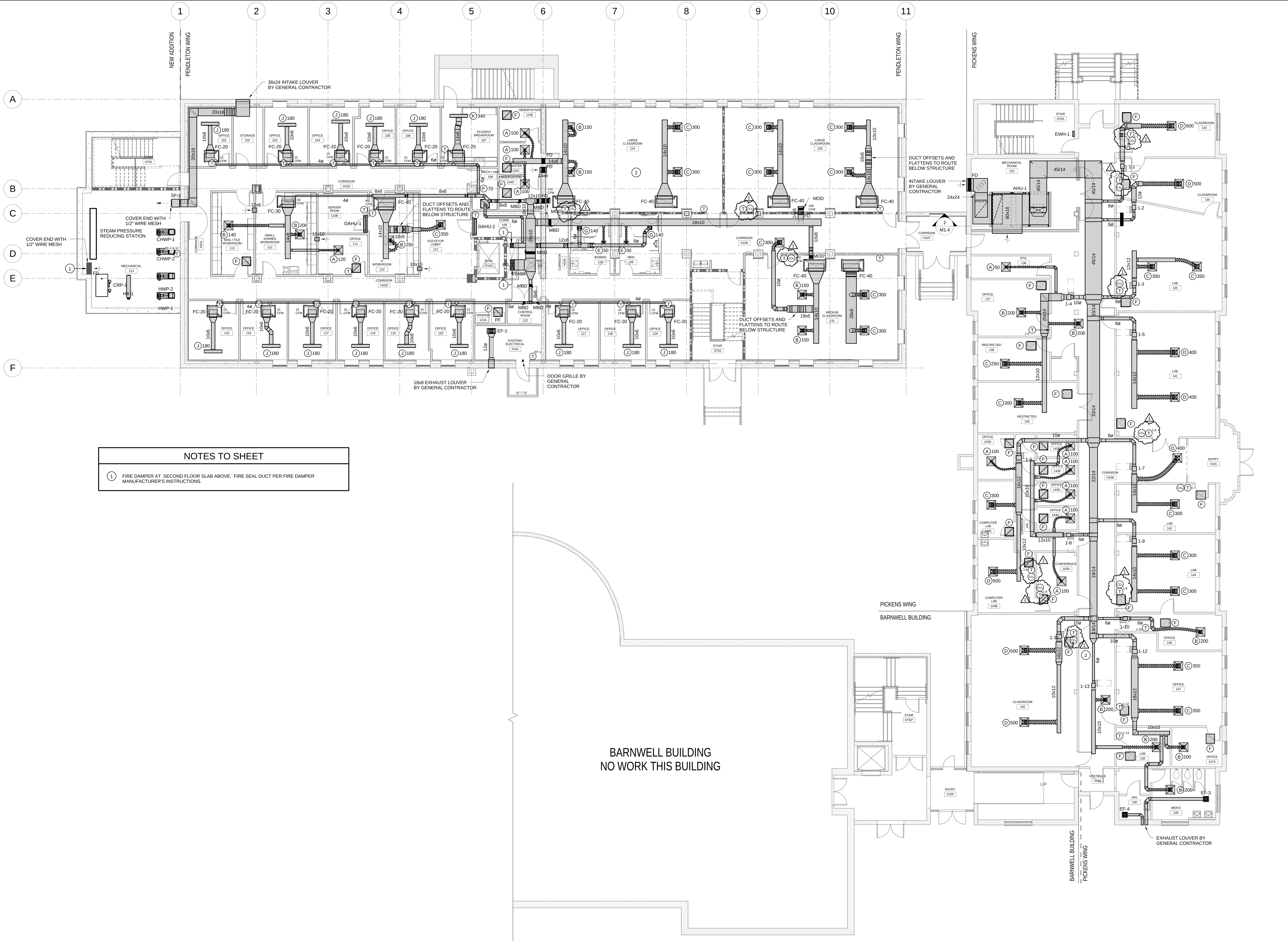
Revisions		
No.	Name	Date
1	ADDENDUM NO. 3	05.08.14

Project No. U-651-07
Date MARCH 7, 2014
Drawn By WCL
Checked By WCL

Drawing Title
MECHANICAL SITE PLAN

Swygert & Associates
CONSULTING ENGINEERS
DBA Swygert & Assoc., Ltd.
Post Office Box 11686
Columbia, S.C. 29211
Telephone: (803) 791-9300
Facsimile: (803) 791-0830
mail@swygert-associates.com

Drawing No.
MS1.1



NOTES TO SHEET

1. FIRE DAMPER AT SECOND FLOOR SLAB ABOVE. FIRE SEAL DUCT PER FIRE DAMPER MANUFACTURER'S INSTRUCTIONS.

5/8/2014 11:45:36 AM

Swygert & Associates
CONSULTING ENGINEERS
DBA Swygert & Assoc., Ltd. Post Office Box 11686 Columbia, S.C. 29211
Telephone: (803) 791-9300 Facsimile: (803) 791-0830 mail@swygert-associates.com

The Boudreaux Group
1330 Lady St., Suite 500 (29201)
P.O. Box 5695
Columbia, SC 29250
803 799 0247 p
803 771 6844 f
info@boudreauxgroup.com
Interdisciplinary Design Architecture Interiors Planning

A/E Seal

A/E Seal

UNIVERSITY OF SOUTH CAROLINA

HAMILTON COLLEGE RENOVATION

STATE PROJECT NUMBER: H27-9905-SG
COLUMBIA, SOUTH CAROLINA

No.	Description	Date
1	ADDENDUM NO.3	05/08/14

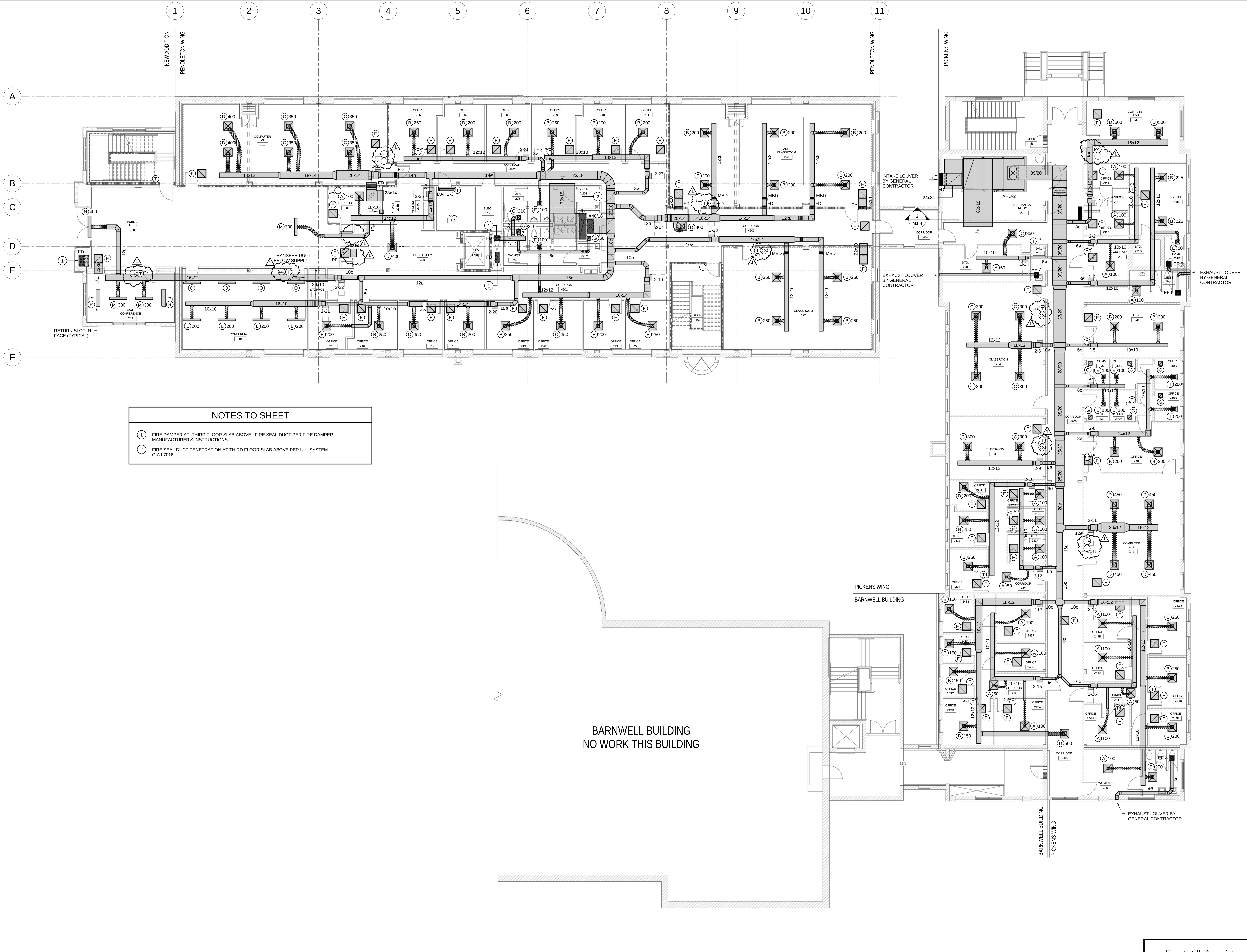
Project Number U-651-07
Drawn By BJJ
Checked By WCL
Date MARCH 7, 2014

Drawing Title.

FIRST FLOOR PLAN

Drawing No.

M1.1



NOTES TO SHEET

1. FIRE DAMPER AT THIRD FLOOR SLAB ABOVE. FIRE SEAL DUCT PER FIRE DAMPER MANUFACTURER'S INSTRUCTIONS.
2. FIRE SEAL DUCT PENETRATION AT THIRD FLOOR SLAB ABOVE PER U.L. SYSTEM C-AJ-7016.

5/8/2014 11:45:51 AM

The Boudreaux Group
1330 Lady St., Suite 500 (29201)
P.O. Box 5695
Columbia, SC 29250
803 799 0247 p
803 771 6844 f
info@boudreauxgroup.com
Interdisciplinary Design Architecture Interiors Planning

A/E Seal

A/E Seal

UNIVERSITY OF SOUTH CAROLINA

HAMILTON COLLEGE RENOVATION

STATE PROJECT NUMBER: H27-9905-SG
COLUMBIA, SOUTH CAROLINA

No.	Description	Date
1	ADDENDUM NO.3	05/08/14

Project Number U-651-07
Drawn By BJJ
Checked By WCL
Date MARCH 7, 2014

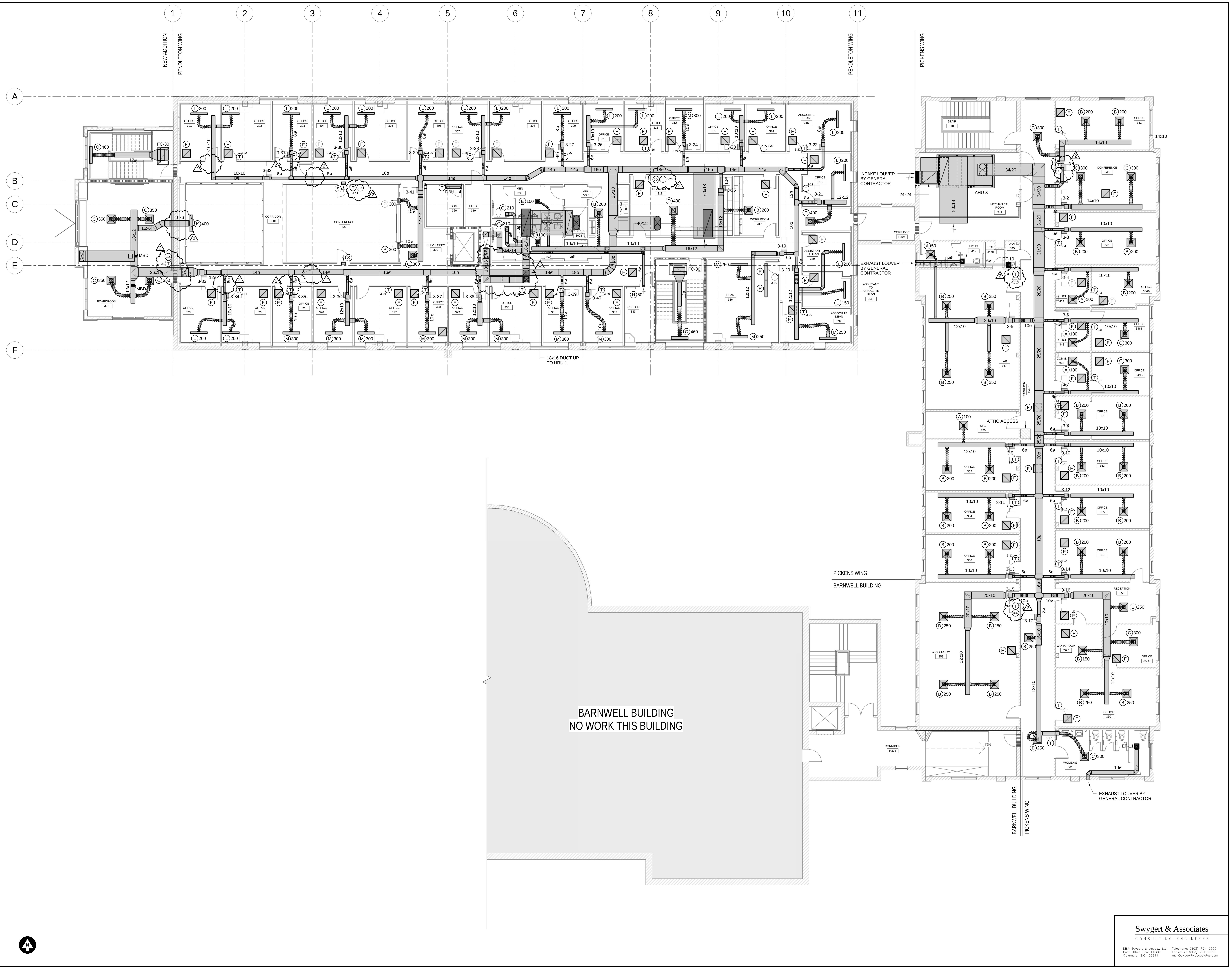
Drawing Title.

SECOND FLOOR PLAN

Swygert & Associates
CONSULTING ENGINEERS
DBA Swygert & Assoc., Ltd. Post Office Box 11686 Columbia, S.C. 29211
Telephone: (803) 791-9300 Facsimile: (803) 791-0830 mail@swygert-associates.com

Drawing No.

M1.2



5/8/2014 11:46:07 AM

The Boudreaux Group

1330 Lady St., Suite 500 (29201)
P.O. Box 5695
Columbia, SC 29250
803 799 0247 p
803 771 6844 f
info@boudreauxgroup.com

Interdisciplinary Design Architecture Interiors Planning

A/E Seal

A/E Seal

UNIVERSITY OF SOUTH CAROLINA

HAMILTON COLLEGE RENOVATION

STATE PROJECT NUMBER: H27-9905-SG
COLUMBIA, SOUTH CAROLINA

No.	Description	Date
2	ADDENDUM NO.3	05/08/14
1	ADDENDUM NO. 2	05/06/14

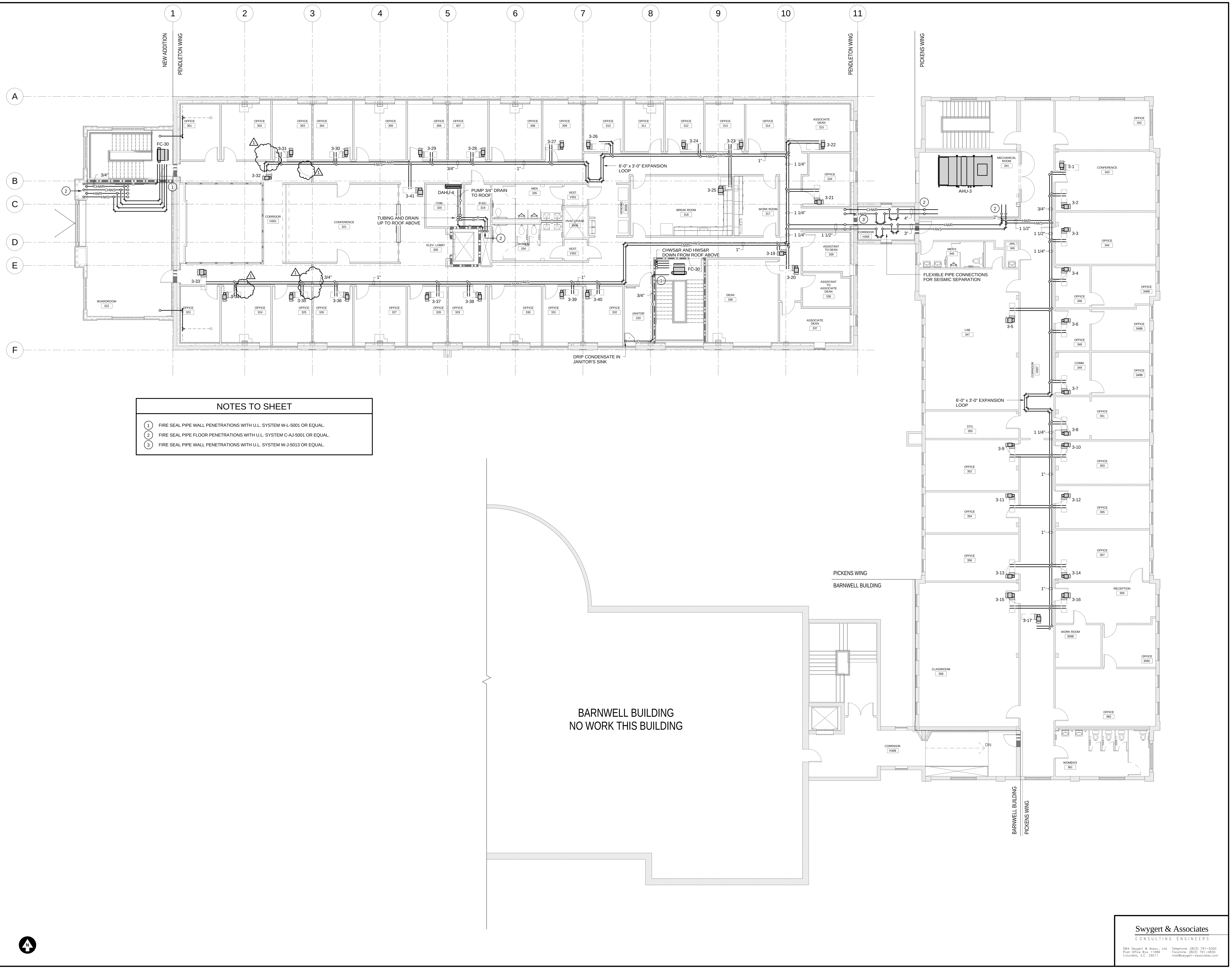
Project Number
U-651-07
Drawn By
BJJ
Checked By
WCL
Date
MARCH 7, 2014

Drawing Title.

THIRD FLOOR PLAN

Swygert & Associates
CONSULTING ENGINEERS
DBA Swygert & Assoc., Ltd. Post Office Box 11686 Columbia, S.C. 29211
Telephone: (803) 791-9300 Facsimile: (803) 791-0830 mail@swygert-associates.com

Drawing No.
M1.3



NOTES TO SHEET

1. FIRE SEAL PIPE WALL PENETRATIONS WITH U.L. SYSTEM W-L-5001 OR EQUAL.
2. FIRE SEAL PIPE FLOOR PENETRATIONS WITH U.L. SYSTEM C-AJ-5001 OR EQUAL.
3. FIRE SEAL PIPE WALL PENETRATIONS WITH U.L. SYSTEM W-J-5013 OR EQUAL.

5/8/2014 11:46:17 AM

The Boudreaux Group
1330 Lady St., Suite 500 (29201)
P.O. Box 5695
Columbia, SC 29250
803 799 0247 p
803 771 6844 f
info@boudreauxgroup.com
Interdisciplinary Design Architecture Interiors Planning

A/E Seal

A/E Seal

UNIVERSITY OF SOUTH CAROLINA

HAMILTON COLLEGE RENOVATION

STATE PROJECT NUMBER: H27-9905-SG
COLUMBIA, SOUTH CAROLINA

Project Number U-651-07
Drawn By BJJ
Checked By WCL
Date MARCH 7, 2014

No.	Description	Date
1	ADDENDUM NO.3	05/08/14

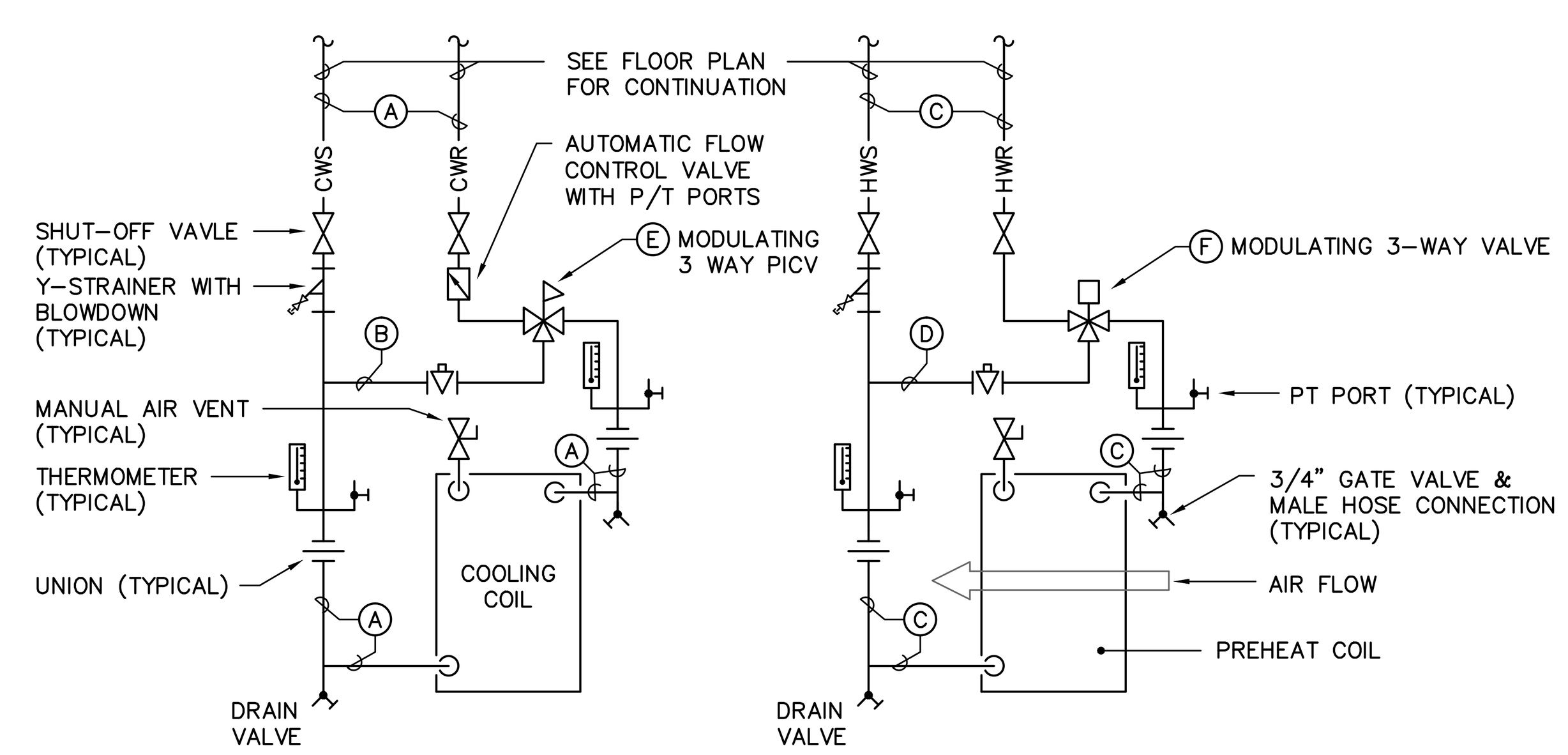
Drawing Title.

THIRD FLOOR PLAN - PIPING

Swygert & Associates
CONSULTING ENGINEERS
DBA Swygert & Assoc., Ltd.
Post Office Box 11686
Columbia, S.C. 29211
Telephone: (803) 791-9300
Facsimile: (803) 791-0830
mail@swygert-associates.com

Drawing No.

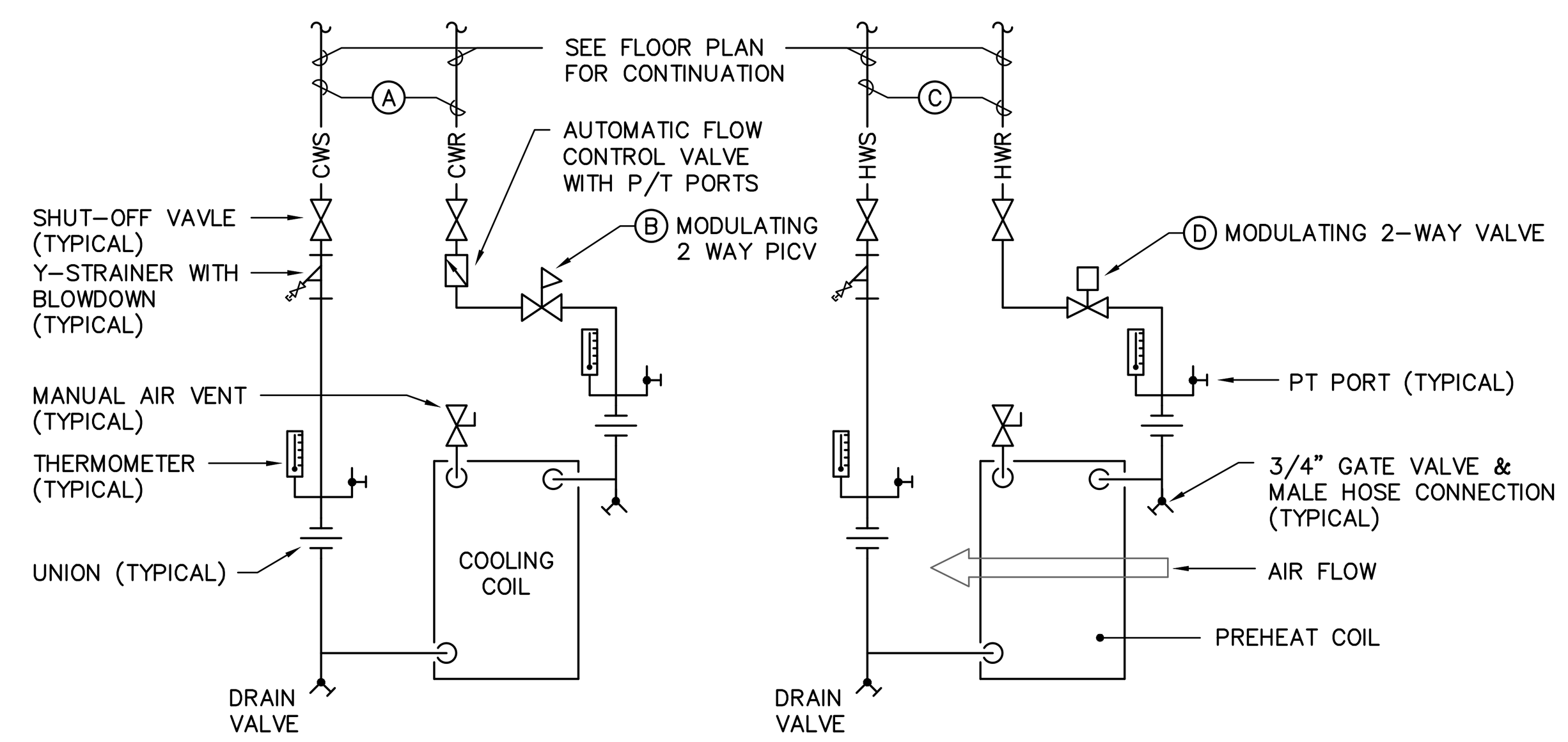
M2.3



SIZES						
UNIT NO.	COOLING COIL			PREHEAT COIL		
	(A)	(B)	(E) Cv	(C)	(D)	(F) Cv
AHU-1	2½"	2½"	32	2"	2"	12.5

DUAL COIL PIPING DETAIL

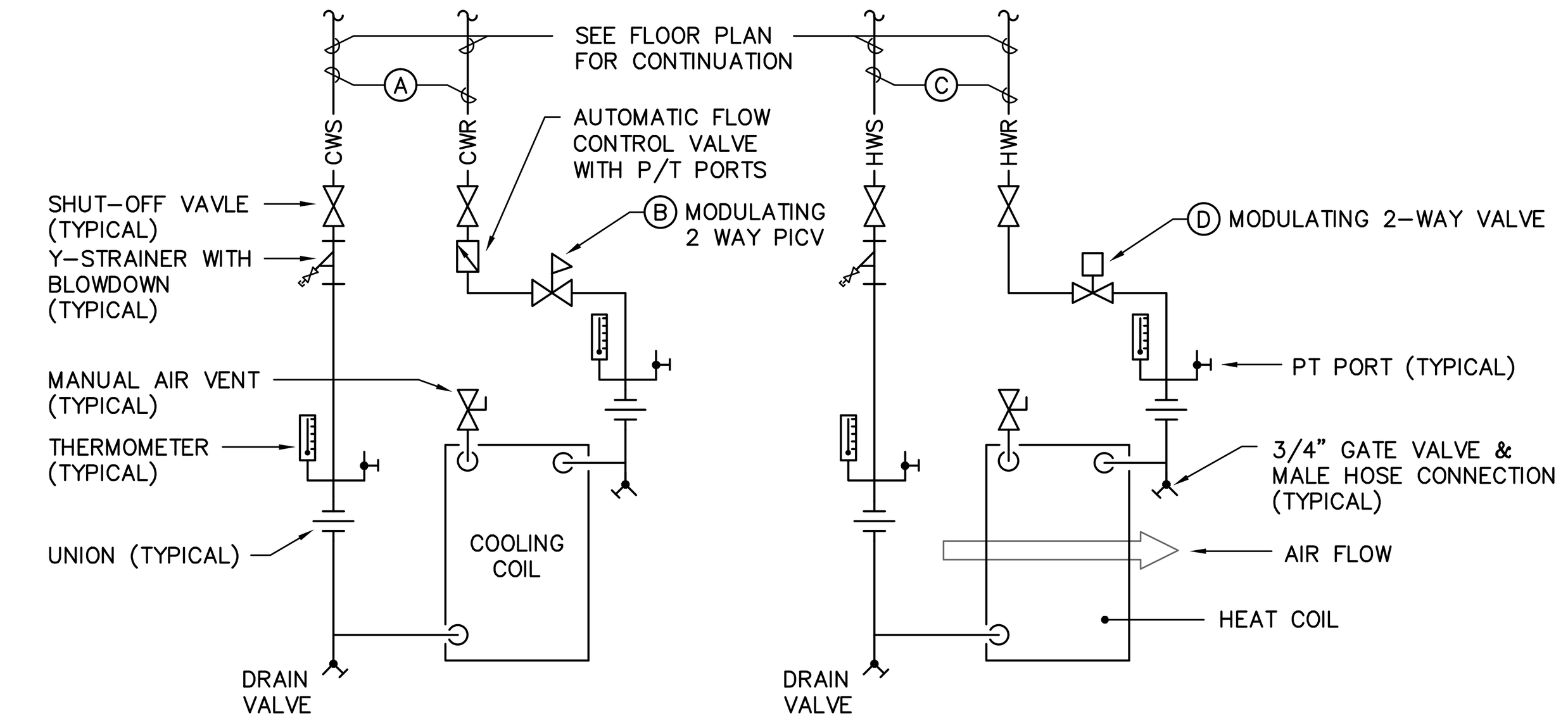
NO SCALE



SIZES				
UNIT NO.	COOLING COIL		PREHEAT COIL	
	(A)	(B) Cv	(C)	(D) Cv
AHU-2	3"	40	2"	15
AHU-3	2½"	36	2"	14
RTU-1	2½"	31	2"	16
RTU-2	2½"	31	2"	16

DUAL COIL PIPING DETAIL

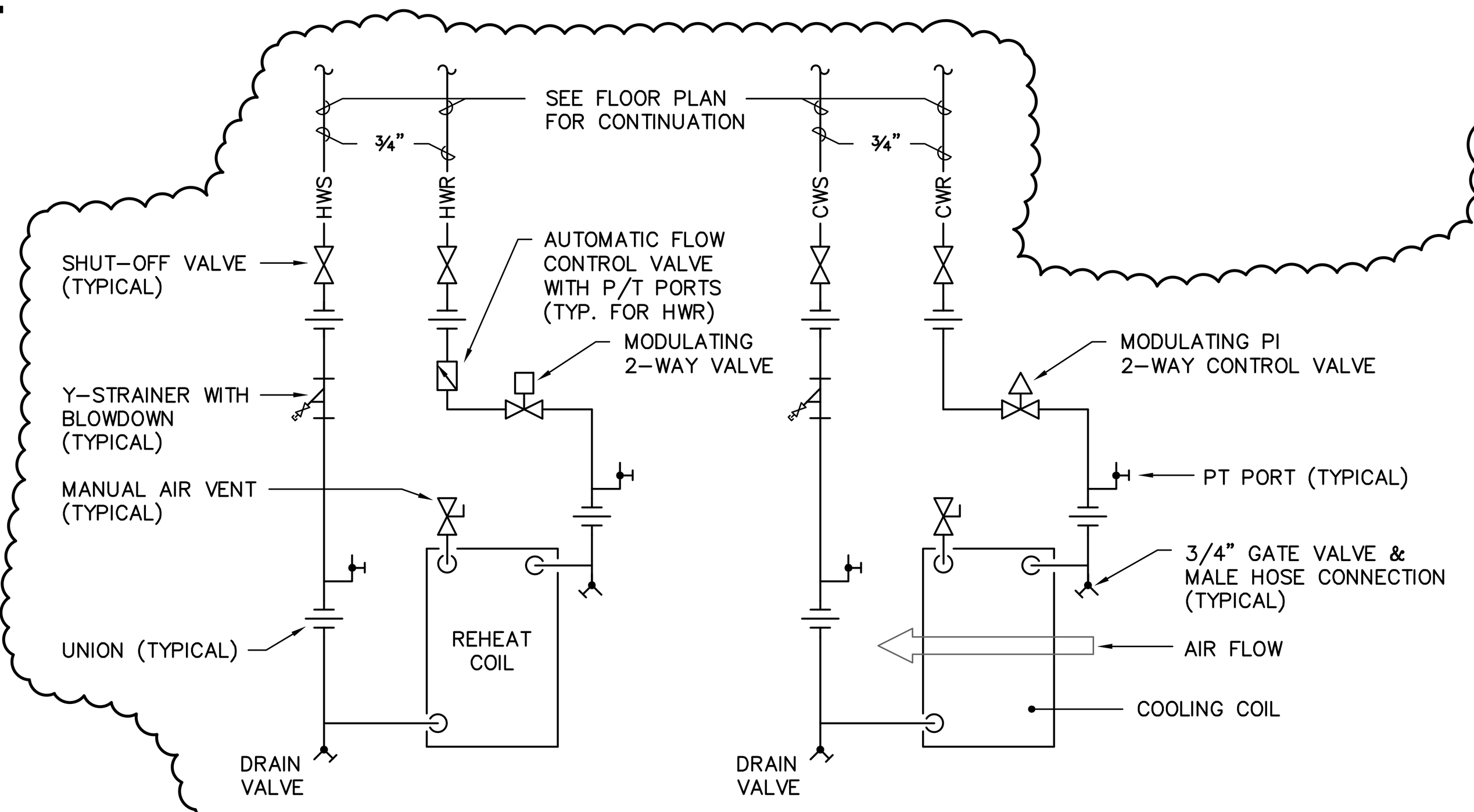
NO SCALE



SIZES				
UNIT NO.	COOLING COIL		PREHEAT COIL	
	(A)	(B) Cv	(C)	(D) Cv
HRU-1	1½"	6.5	1"	1.5

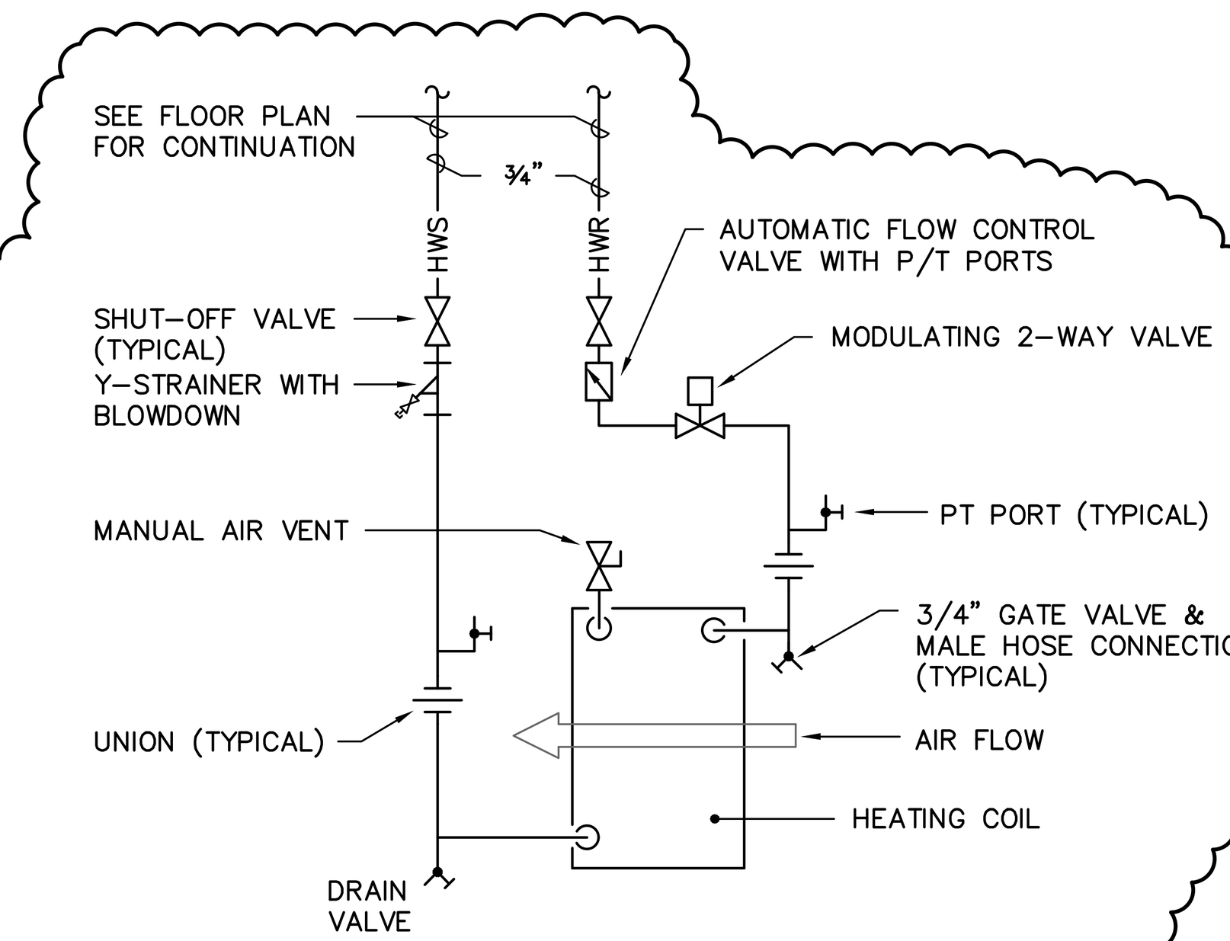
DUAL COIL PIPING DETAIL

NO SCALE



FAN COIL PIPING DETAIL

NO SCALE

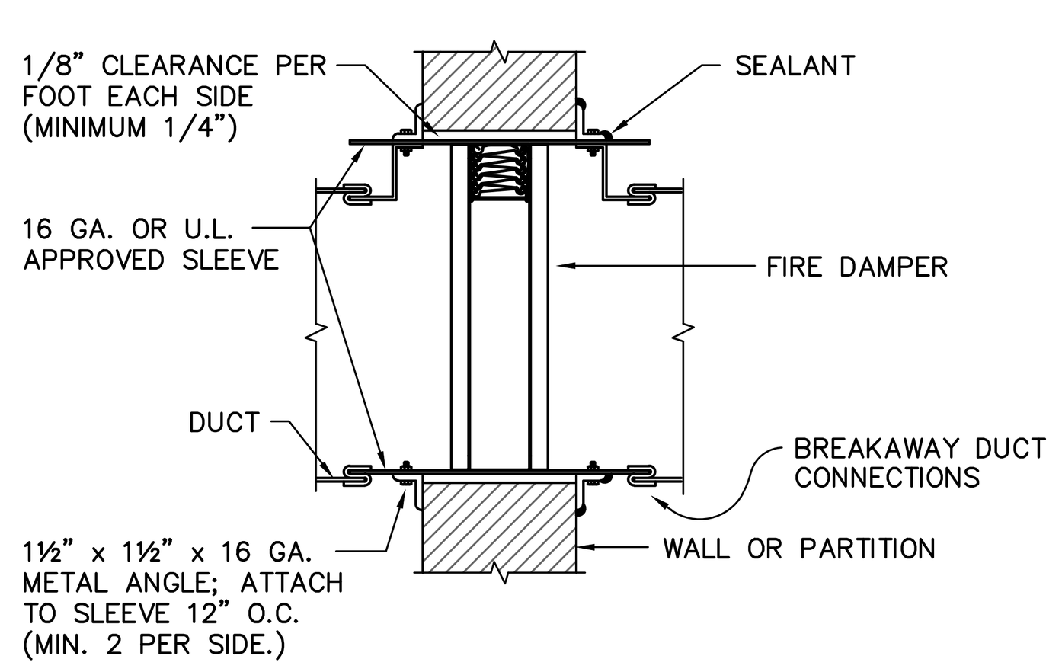


VAV HEATING COIL PIPING DETAIL

NO SCALE

NOTES:

1. PROVIDE FIRE DAMPERS FOR ALL WALLS INDICATED. SEE ARCHITECTURAL DRAWINGS FOR WALL TYPES.
2. PROVIDE DUCT ACCESS DOORS.
3. PROVIDE ALL CEILING, FLOOR, OR WALL ACCESS DOORS NECESSARY FOR ACCESS TO FIRE DAMPERS.
4. INSTALLATION SHALL COMPLY WITH SMACNA, NFPA 90A, 2012 IBC, UL555, AND LOCAL AUTHORITIES.
5. FOR EXTERNALLY WRAPPED DUCT, BLANKET INSULATION SHALL BE INSTALLED OVER ANGLES AND SEALED TO WALL.
6. SLEEVE SHALL BE MANUFACTURED AS AN INTEGRAL PART OF FIRE DAMPER.
7. IN ALL INSTANCES MANUFACTURER'S UL LISTED INSTALLATION INSTRUCTIONS SHALL BE USED FOR DAMPER INSTALLATION.

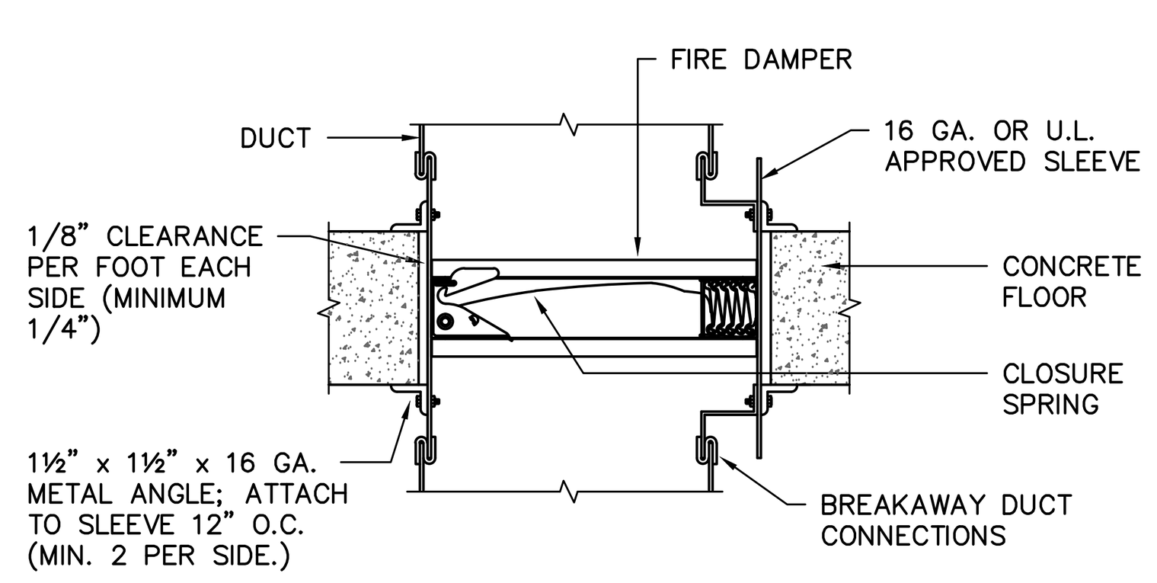


FIRE DAMPER DETAIL

NO SCALE

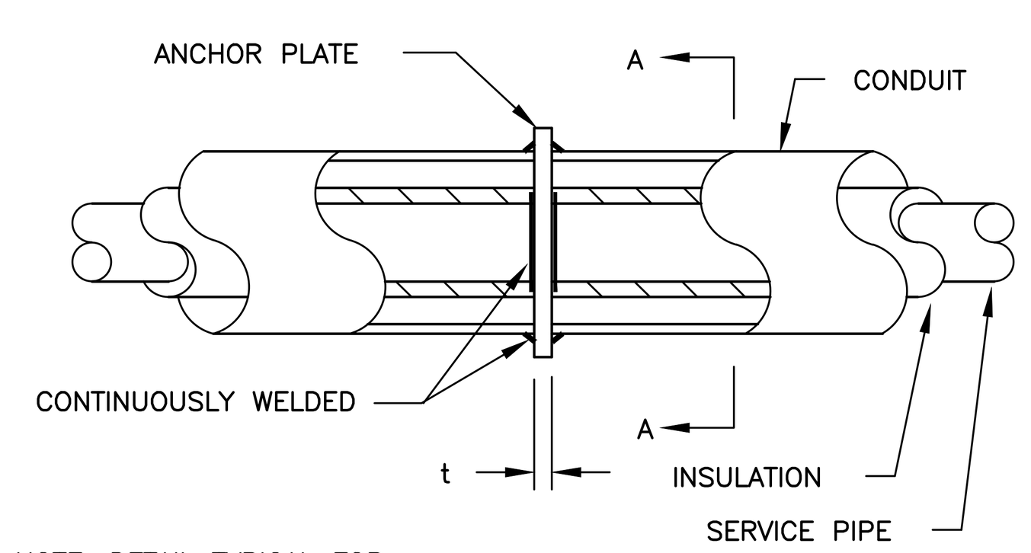
NOTES:

1. PROVIDE FIRE DAMPERS FOR ALL WALLS INDICATED. SEE ARCHITECTURAL DRAWINGS FOR WALL TYPES.
2. PROVIDE DUCT ACCESS DOORS.
3. PROVIDE ALL CEILING, FLOOR, OR WALL ACCESS DOORS NECESSARY FOR ACCESS TO FIRE DAMPERS.
4. INSTALLATION SHALL COMPLY WITH SMACNA, NFPA 90A, 2012 IBC, UL555, AND LOCAL AUTHORITIES.
5. FOR EXTERNALLY WRAPPED DUCT, BLANKET INSULATION SHALL BE INSTALLED OVER ANGLES AND SEALED TO WALL.
6. SLEEVE SHALL BE MANUFACTURED AS AN INTEGRAL PART OF FIRE DAMPER.
7. IN ALL INSTANCES MANUFACTURER'S UL LISTED INSTALLATION INSTRUCTIONS SHALL BE USED FOR DAMPER INSTALLATION.



FIRE DAMPER DETAIL

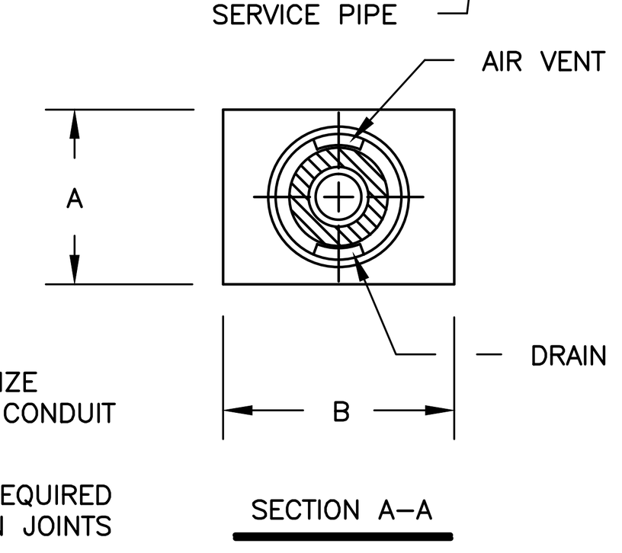
NO SCALE



NOTE: DETAIL TYPICAL FOR TWO PIPES. ANCHOR ASSEMBLIES TO BE POSITIONED NO FURTHER THAN 5' FROM MANHOLE.

A = ANCHOR PLATE HEIGHT = CONDUIT O. D. + 1"
B = ANCHOR PLATE WIDTH = CONDUIT O. D. + 6"
t* = ANCHOR PLATE THICKNESS 1/2" UP TO 22" CONDUIT SIZE 3/4" FOR 24" AND LARGER CONDUIT SIZES.

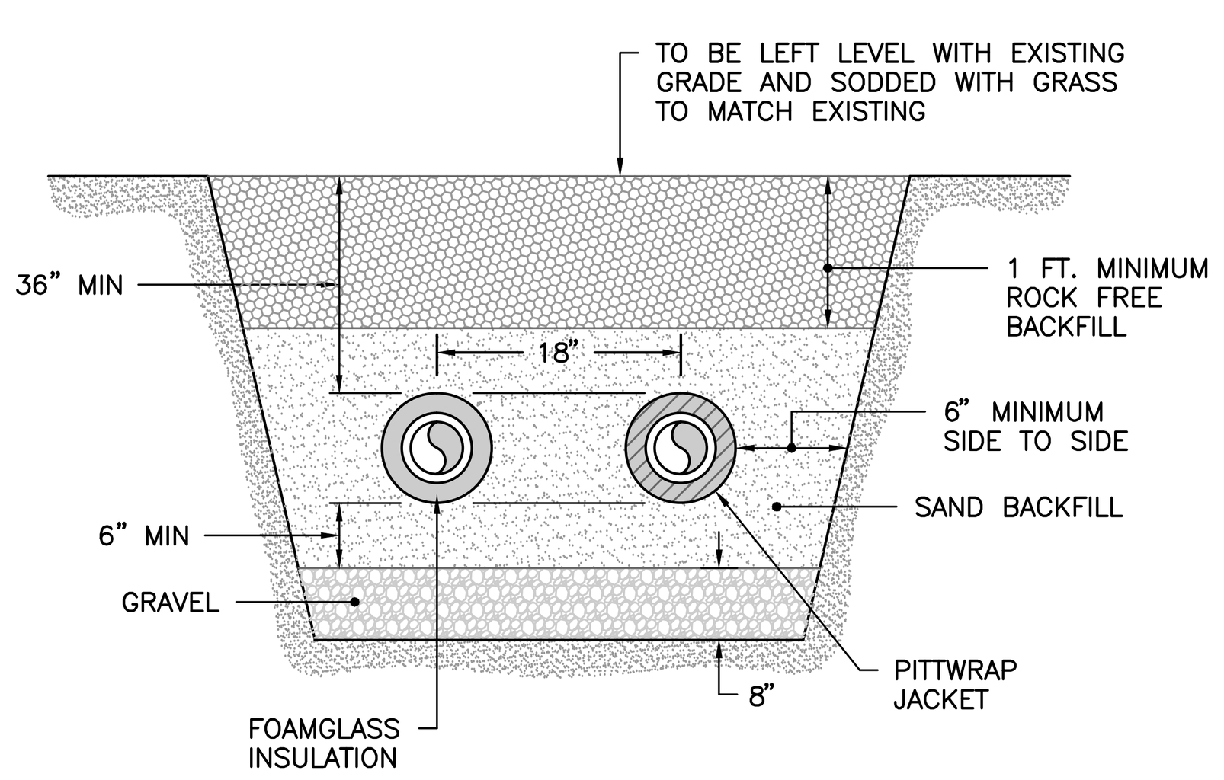
* SPECIAL PLATE THICKNESS REQUIRED FOR SYSTEMS W/ EXPANSION JOINTS



NOTE: A CONCRETE BLOCK SHALL BE CAST OVER THE PLATE AND CONDUIT AND SHALL BE AT LEAST 30" IN LENGTH AND SHALL EXTEND A MINIMUM OF 9" BEYOND THE TOP AND BOTTOM OF ANCHOR PLATE.

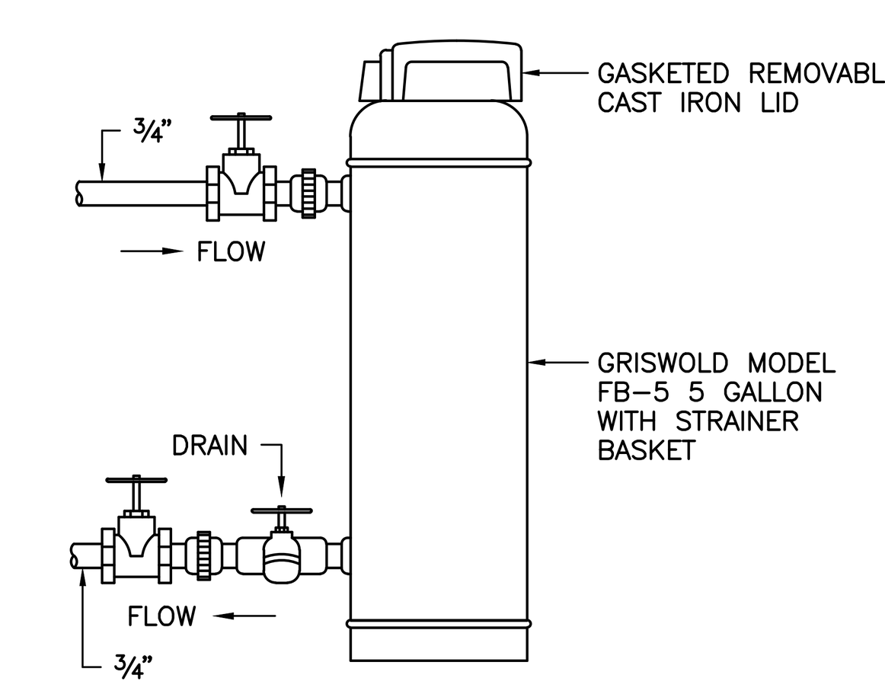
STANDARD ANCHOR ASSEMBLY

NO SCALE



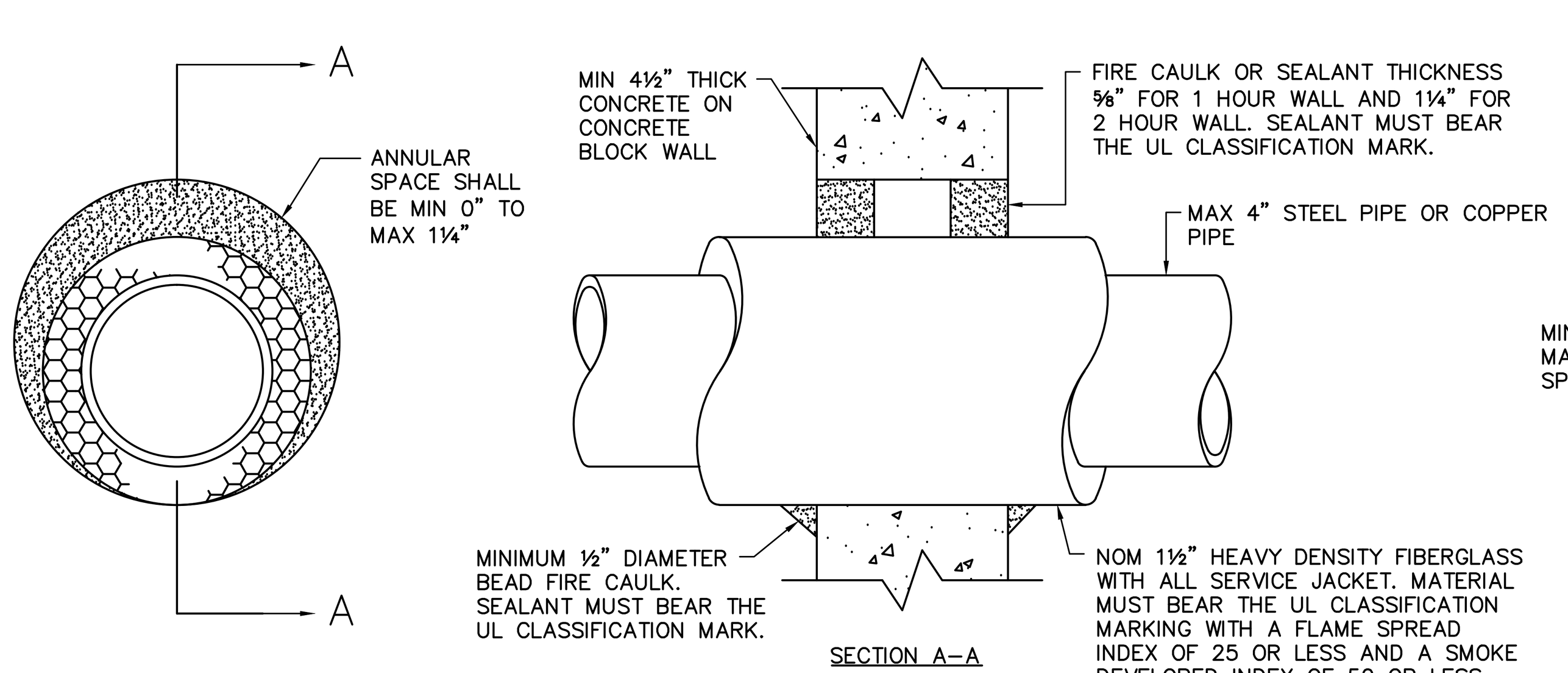
BACKFILL DETAIL

NO SCALE



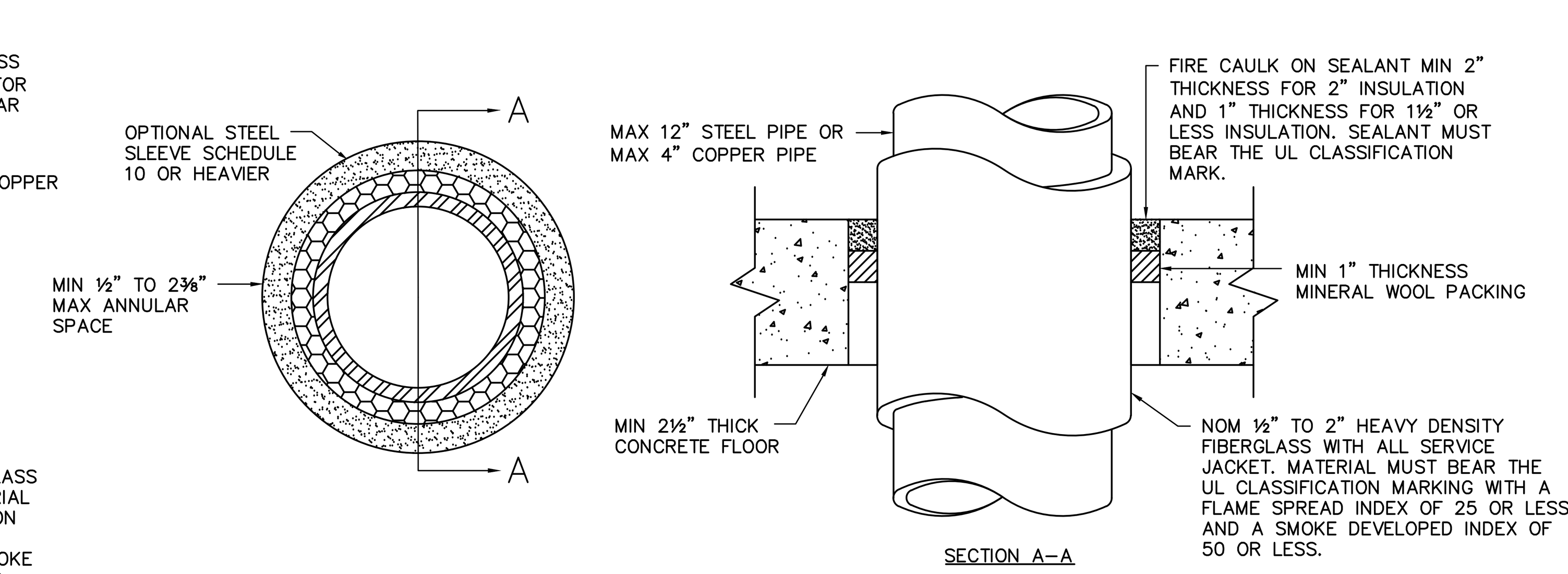
CHEMICAL FEEDER DETAIL

NO SCALE



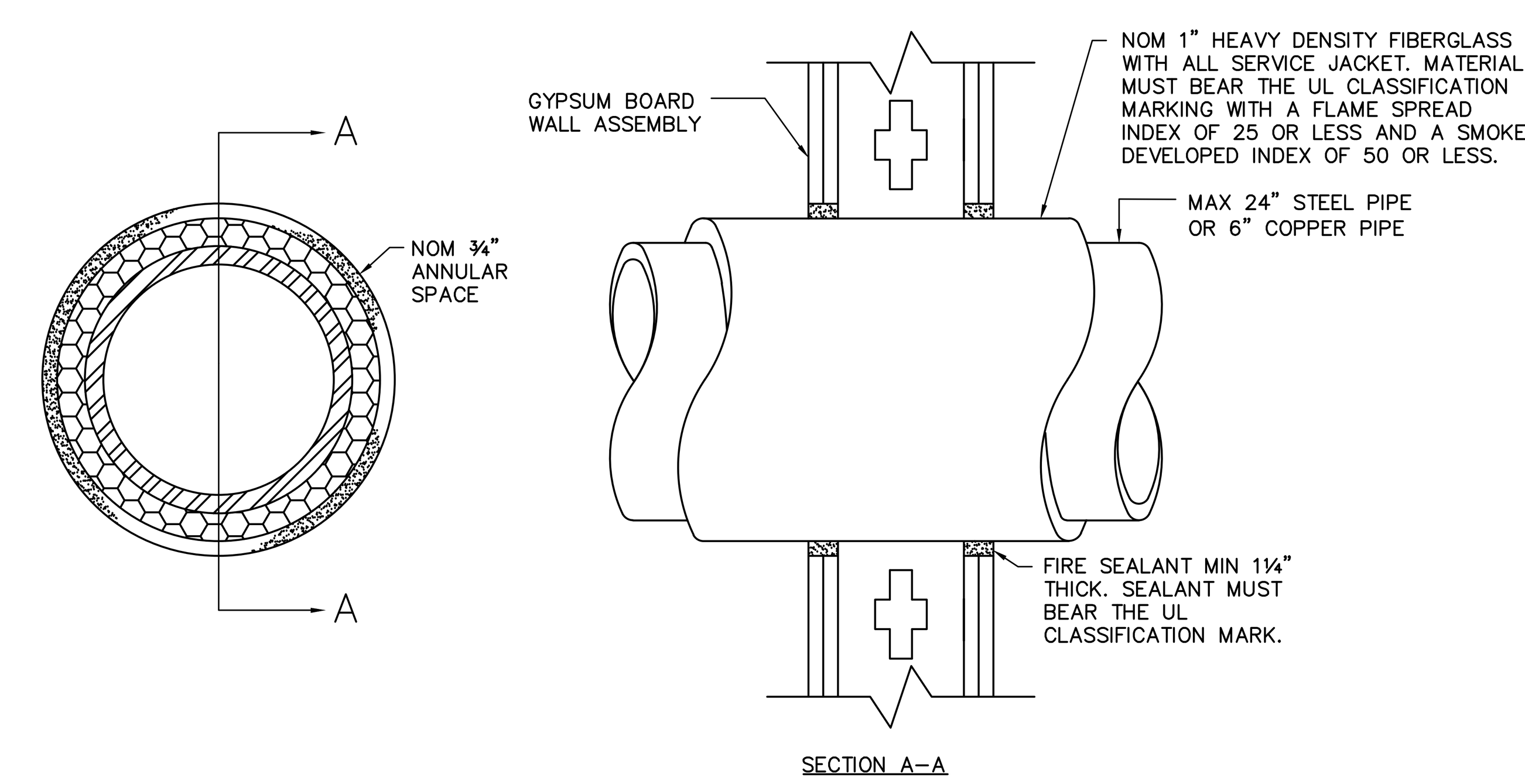
U.L. SYSTEM W–J–5013 DETAIL

NO SCALE



U.L. SYSTEM C–AJ–5001 DETAIL

NO SCALE



U.L. SYSTEM W–L–5032 DETAIL

NO SCALE

N: \PROJECTS\12660\DRAWINGS\HVAC\12660–M4_3.dwg

Swygert & Associates
CONSULTING ENGINEERS
DBA Swygert & Assoc., Ltd. Post Office Box 11686 Columbia, S.C. 29211
Telephone: (803) 791–9300 Facsimile: (803) 791–0830 mail@swygert–associates.com

The Boudreaux Group
The Boudreaux Group, Inc. 1330 Lady St., Suite 500 (29201) P.O. Box 5695 Columbia, SC 29250 803 799 0247 p 803 771 6844 f info@boudreauxgroup.com
Interdisciplinary Design Architecture Interiors Planning

A/E Seal

A/E Seal

UNIVERSITY OF SOUTH CAROLINA

HAMILTON COLLEGE RENOVATION

STATE PROJECT NUMBER: H27-9905-SG
COLUMBIA, SOUTH CAROLINA

Project No. U–651–07
Date MARCH 7, 2014
Drawn By DEM
Checked By WCL

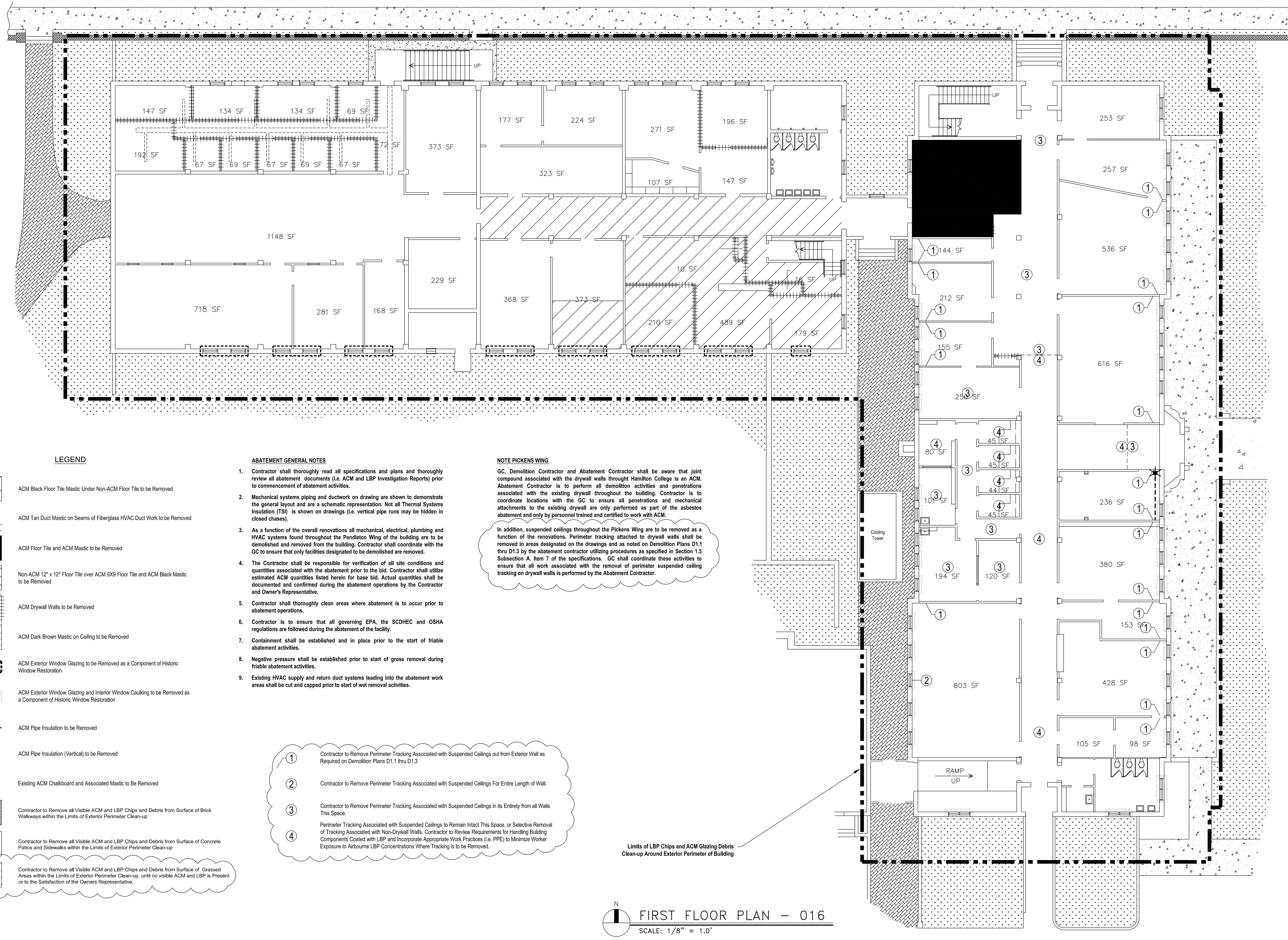
Revisions		
No.	Name	Date
1	ADDENDUM NO. 3	05.08.14

Drawing Title

DETAILS

Drawing No.

M4.3



Limits of LBP Chips and ACM Glazing Debris Clean-up Around Exterior Perimeter of Building

LEGEND

- ACM Black Floor Tile Mastic Under Non-ACM Floor Tile to be Removed
- ACM Tan Duct Mastic on Seams of Fiberglass HVAC Duct Work to be Removed
- ACM Floor Tile and ACM Mastic to be Removed
- Non-ACM 12" x 12" Floor Tile over ACM 9X9 Floor Tile and ACM Black Mastic to be Removed
- ACM Drywall Walls to be Removed
- ACM Dark Brown Mastic on Ceiling to be Removed
- ACM Exterior Window Glazing to be Removed as a Component of Historic Window Restoration
- ACM Exterior Window Glazing and Interior Window Caulking to be Removed as a Component of Historic Window Restoration
- ACM Pipe Insulation to be Removed
- ACM Pipe Insulation (Vertical) to be Removed
- Existing ACM Chalkboard and Associated Mastic to Be Removed
- Contractor to Remove all Visible ACM and LBP Chips and Debris from Surface of Brick Walkways within the Limits of Exterior Perimeter Clean-up
- Contractor to Remove all Visible ACM and LBP Chips and Debris from Surface of Concrete Patios and Sidewalks within the Limits of Exterior Perimeter Clean-up
- Contractor to Remove all Visible ACM and LBP Chips and Debris from Surface of Grassed Areas within the Limits of Exterior Perimeter Clean-up. until no visible ACM and LBP is Present or to the Satisfaction of the Owners Representative.

ABATEMENT GENERAL NOTES

1. **Contractor shall thoroughly read all specifications and plans and thoroughly review all abatement documents (i.e. ACM and LBP Investigation Reports) prior to commencement of abatement activities.**
2. **Mechanical systems piping and ductwork on drawing are shown to demonstrate the general layout and are a schematic representation. Not all Thermal Systems Insulation (TSI) is shown on drawings (i.e. vertical pipe runs may be hidden in closed chases).**
3. **As a function of the overall renovations all mechanical, electrical, plumbing and HVAC systems found throughout the Pendleton Wing of the building are to be demolished and removed from the building. Contractor shall coordinate with the GC to ensure that only facilities designated to be demolished are removed.**
4. **The Contractor shall be responsible for verification of all site conditions and quantities associated with the abatement prior to the bid. Contractor shall utilize estimated ACM quantities listed herein for base bid. Actual quantities shall be documented and confirmed during the abatement operations by the Contractor and Owner's Representative.**
5. **Contractor shall thoroughly clean areas where abatement is to occur prior to abatement operations.**
6. **Contractor is to ensure that all governing EPA, the SCDHEC and OSHA regulations are followed during the abatement of the facility.**
7. **Containment shall be established and in place prior to the start of friable abatement activities.**
8. **Negative pressure shall be established prior to start of gross removal during friable abatement activities.**
9. **Existing HVAC supply and return duct systems leading into the abatement work areas shall be cut and capped prior to start of wet removal activities.**

NOTE PICKENS WING

GC, Demolition Contractor and Abatement Contractor shall be aware that joint compound associated with the drywall walls throught Hamilton College is an ACM. Abatement Contractor is to perform all demolition activities and penetrations associated with the existing drywall throughout the building. Contractor is to coordinate locations with the GC to ensure all penetrations and mechanical attachments to the existing drywall are only performed as part of the asbestos abatement and only by personnel trained and certified to work with ACM.

In addition, suspended ceilings throughout the Pickens Wing are to be removed as a function of the renovations. Perimeter tracking attached to drywall walls shall be removed in areas designated on the drawings and as noted on Demolition Plans D1.1 thru D1.3 by the abatement contractor utilizing procedures as specified in Section 1.5 Subsection A. Item 7 of the specifications. GC shall coordinate these activities to ensure that all work associated with the removal of perimeter suspended ceiling tracking on drywall walls is performed by the Abatement Contractor.

(1) Contractor to Remove Perimeter Tracking Associated with Suspended Ceilings out from Exterior Wall as Required on Demolition Plans D1.1 thru D1.3

(2) Contractor to Remove Perimeter Tracking Associated with Suspended Ceilings For Entire Length of Wall.

(3) Contractor to Remove Perimeter Tracking Associated with Suspended Ceilings in its Entirety from all Walls This Space.

(4) Perimeter Tracking Associated with Suspended Ceilings to Remain Intact This Space, or Selective Removal of Tracking Associated with Non-Drywall Walls. Contractor to Review Requirements for Handling Building Components Coated with LBP and Incorporate Appropriate Work Practices (i.e. PPE) to Minimize Worker Exposure to Airbourne LBP Concentrations Where Tracking is to be Removed.

FIRST FLOOR PLAN – 016

SCALE: 1/8" = 1.0'

F&ME CONSULTANTS
GEOTECHNICAL - ENVIRONMENTAL - MATERIALS
COLUMBIA, SOUTH CAROLINA
F&ME CONSULTANTS, INC.
3112 Devine Street
Columbia, S.C. 29205
Telephone: (803) 254-4540
Facsimile: (803) 254-4542
gellen@fmecol.com

GLYNN M. ELLEN
ASBESTOS CONSULTANT PROJECT DESIGNER
SCDHEC LICENSE NO: PD-00098
EXPIRES: 06/13/2014

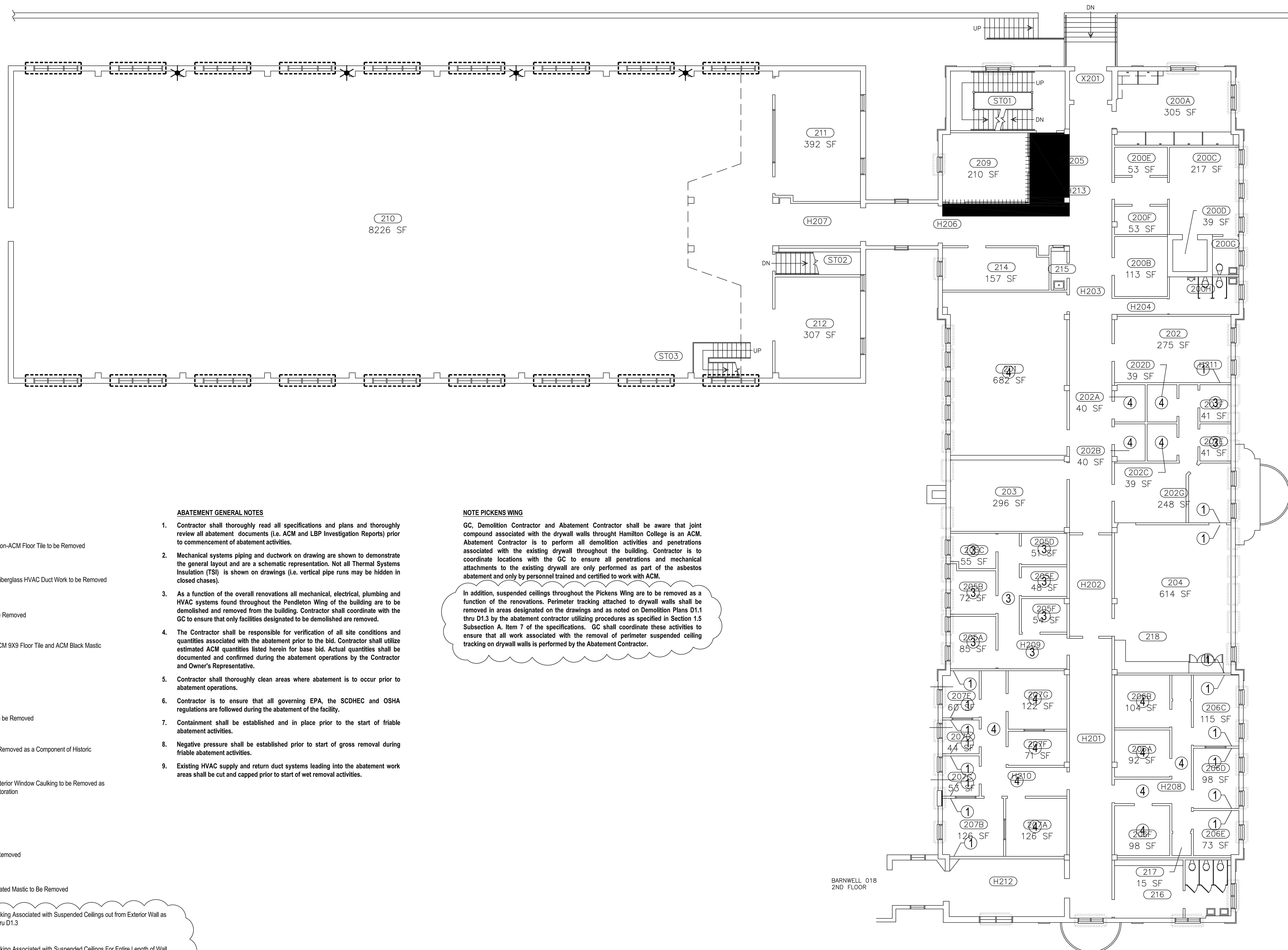
PROJECT TITLE:
HAMILTON COLLEGE RENOVATIONS
USC BUILDING NO: 016
UNIVERSITY OF SOUTH CAROLINA
STATE PROJECT NUMBER H27-9905-PM
CONSTRUCTION DOCUMENTS

DRAWING: AB-1	DATE: 1/30/14	DRAWN BY: GME	CHECKED BY: GME
REV.	DESCRIPTION	DATE	ORIG. BY	DRAWN BY
#1	Revisions for Adendum #3	5-08-14	GME	GME

THIS DRAWING AND ASSOCIATED ABATEMENT DESIGN HAS BEEN PREPARED BY GLYNN M. ELLEN ABATEMENT PROJECT DESIGNER SCDHEC LICENSE NO: PD-00098

SHEET TITLE:
ASBESTOS ABATEMENT PLAN
FIRST FLOOR LEVEL

SHEET:
AB-1



LEGEND

- ACM Black Floor Tile Mastic Under Non-ACM Floor Tile to be Removed
- ACM Tan Duct Mastic on Seams of Fiberglass HVAC Duct Work to be Removed
- ACM Floor Tile and ACM Mastic to be Removed
- Non-ACM 12" x 12" Floor Tile over ACM 9X9 Floor Tile and ACM Black Mastic to be Removed
- ACM Drywall Walls to be Removed
- ACM Dark Brown Mastic on Ceiling to be Removed
- ACM Exterior Window Glazing to be Removed as a Component of Historic Window Restoration
- ACM Exterior Window Glazing and Interior Window Caulking to be Removed as a Component of Historic Window Restoration
- ACM Pipe Insulation to be Removed
- ACM Pipe Insulation (Vertical) to be Removed
- Existing ACM Chalkboard and Associated Mastic to Be Removed

(1) Contractor to Remove Perimeter Tracking Associated with Suspended Ceilings out from Exterior Wall as Required on Demolition Plans D1.1 thru D1.3

(2) Contractor to Remove Perimeter Tracking Associated with Suspended Ceilings For Entire Length of Wall.

(3) Contractor to Remove Perimeter Tracking Associated with Suspended Ceilings in its Entirety from all Walls This Space.

(4) Perimeter Tracking Associated with Suspended Ceilings to Remain Intact This Space, or Selective Removal of Tracking Associated with Non-Drywall Walls. Contractor to Review Requirements for Handling Building Components Coated with LBP and Incorporate Appropriate Work Practices (i.e. PPE) to Minimize Worker Exposure to Airbourne LBP Concentrations Where Tracking is to be Removed.

ABATEMENT GENERAL NOTES

1. Contractor shall thoroughly read all specifications and plans and thoroughly review all abatement documents (i.e. ACM and LBP Investigation Reports) prior to commencement of abatement activities.
2. Mechanical systems piping and ductwork on drawing are shown to demonstrate the general layout and are a schematic representation. Not all Thermal Systems Insulation (TSI) is shown on drawings (i.e. vertical pipe runs may be hidden in closed chases).
3. As a function of the overall renovations all mechanical, electrical, plumbing and HVAC systems found throughout the Pendleton Wing of the building are to be demolished and removed from the building. Contractor shall coordinate with the GC to ensure that only facilities designated to be demolished are removed.
4. The Contractor shall be responsible for verification of all site conditions and quantities associated with the abatement prior to the bid. Contractor shall utilize estimated ACM quantities listed herein for base bid. Actual quantities shall be documented and confirmed during the abatement operations by the Contractor and Owner's Representative.
5. Contractor shall thoroughly clean areas where abatement is to occur prior to abatement operations.
6. Contractor is to ensure that all governing EPA, the SCDHEC and OSHA regulations are followed during the abatement of the facility.
7. Containment shall be established and in place prior to the start of friable abatement activities.
8. Negative pressure shall be established prior to start of gross removal during friable abatement activities.
9. Existing HVAC supply and return duct systems leading into the abatement work areas shall be cut and capped prior to start of wet removal activities.

NOTE PICKENS WING

GC, Demolition Contractor and Abatement Contractor shall be aware that joint compound associated with the drywall walls throught Hamilton College is an ACM. Abatement Contractor is to perform all demolition activities and penetrations associated with the existing drywall throughout the building. Contractor is to coordinate locations with the GC to ensure all penetrations and mechanical attachments to the existing drywall are only performed as part of the asbestos abatement and only by personnel trained and certified to work with ACM.

In addition, suspended ceilings throughout the Pickens Wing are to be removed as a function of the renovations. Perimeter tracking attached to drywall walls shall be removed in areas designated on the drawings and as noted on Demolition Plans D1.1 thru D1.3 by the abatement contractor utilizing procedures as specified in Section 1.5 Subsection A. Item 7 of the specifications. GC shall coordinate these activities to ensure that all work associated with the removal of perimeter suspended ceiling tracking on drywall walls is performed by the Abatement Contractor.

N

SECOND FLOOR PLAN – 016

SCALE: 1/8" = 1.0'

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

F&ME CONSULTANTS, INC.
3112 Devine Street
Columbia, S.C. 29205

Telephone: (803) 254-4540
Facsimile: (803) 254-4542
gellen@fmecol.com

GLYNN M. ELLEN
ASBESTOS CONSULTANT PROJECT DESIGNER
SCDHEC LICENSE NO: PD-00098
EXPIRES: 06/13/2014

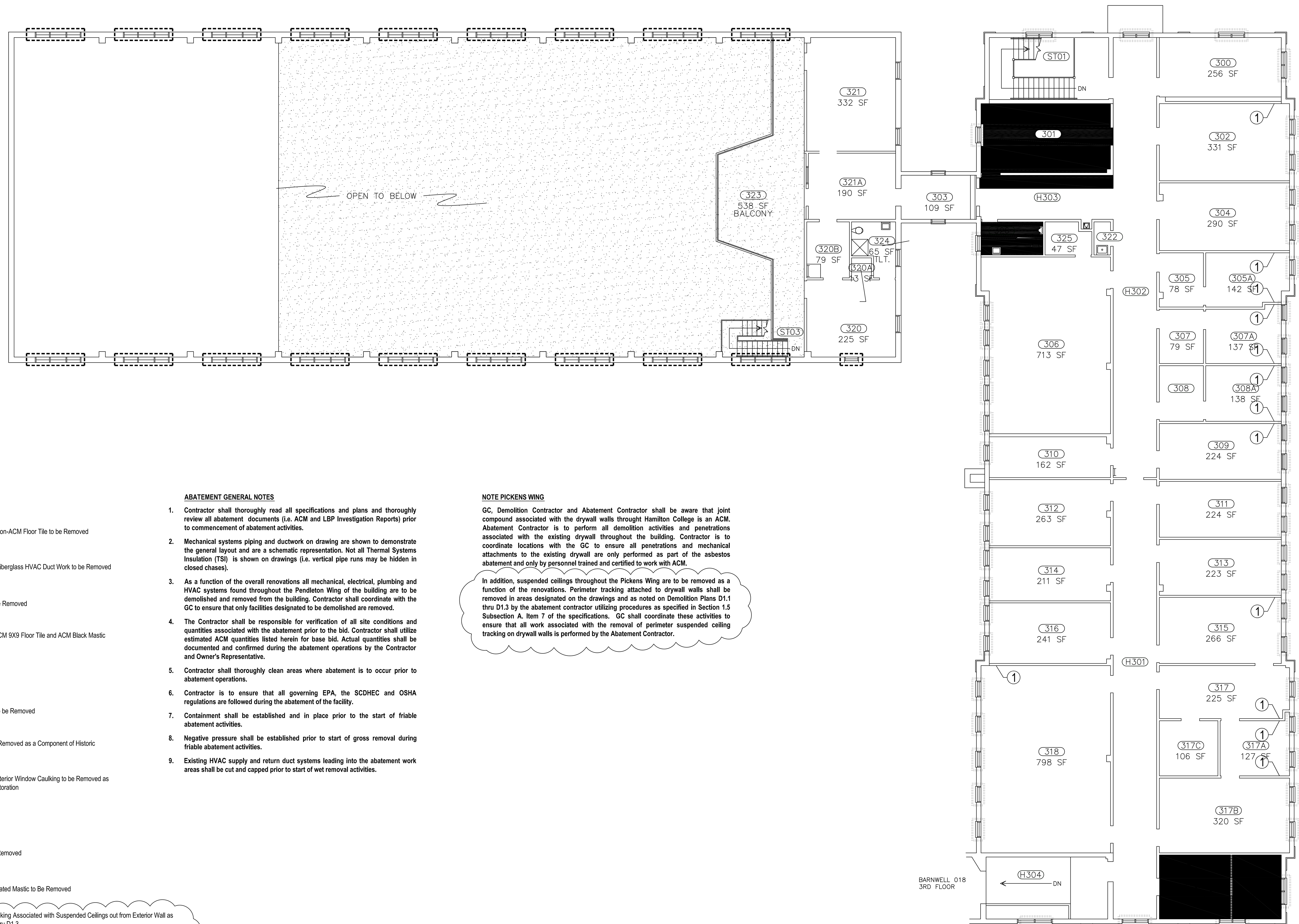
PROJECT TITLE:
HAMPTON COLLEGE RENOVATIONS
USC BUILDING NO: 016
UNIVERSITY OF SOUTH CAROLINA
STATE PROJECT NUMBER H27-9905-PM
CONSTRUCTION DOCUMENTS

DRAWING:	AB-2	DATE:	1/30/14	DRAWN BY:	GME	CHECKED BY:	JLS
REV.	DESCRIPTION			DATE	ORIG. BY	DRAWN BY	
#1	Revisions for Adendum #3			5-08-14	GME	GME	

THIS DRAWING AND ASSOCIATED ABATEMENT DESIGN HAS BEEN PREPARED BY GLYNN M. ELLEN ABATEMENT PROJECT DESIGNER SCDHEC LICENSE NO: PD-00098

SHEET TITLE:
ASBESTOS ABATEMENT PLAN
SECOND FLOOR LEVEL

SHEET:
AB-2



THIRD FLOOR PLAN – 016

SCALE: 1" = 20'

LEGEND

- ACM Black Floor Tile Mastic Under Non-ACM Floor Tile to be Removed
- ACM Tan Duct Mastic on Seams of Fiberglass HVAC Duct Work to be Removed
- ACM Floor Tile and ACM Mastic to be Removed
- Non-ACM 12" x 12" Floor Tile over ACM 9X9 Floor Tile and ACM Black Mastic to be Removed
- ACM Drywall Walls to be Removed
- ACM Dark Brown Mastic on Ceiling to be Removed
- ACM Exterior Window Glazing to be Removed as a Component of Historic Window Restoration
- ACM Exterior Window Glazing and Interior Window Caulking to be Removed as a Component of Historic Window Restoration
- ACM Pipe Insulation to be Removed
- ACM Pipe Insulation (Vertical) to be Removed
- Existing ACM Chalkboard and Associated Mastic to Be Removed

(1) Contractor to Remove Perimeter Tracking Associated with Suspended Ceilings out from Exterior Wall as Required on Demolition Plans D1.1 thru D1.3

(2) Contractor to Remove Perimeter Tracking Associated with Suspended Ceilings For Entire Length of Wall.

(3) Contractor to Remove Perimeter Tracking Associated with Suspended Ceilings in its Entirety from all Walls This Space.

(4) Perimeter Tracking Associated with Suspended Ceilings to Remain Intact This Space, or Selective Removal of Tracking Associated with Non-Drywall Walls. Contractor to Review Requirements for Handling Building Components Coated with LBP and Incorporate Appropriate Work Practices (i.e. PPE) to Minimize Worker Exposure to Airbourne LBP Concentrations Where Tracking is to be Removed.

ABATEMENT GENERAL NOTES

1. **Contractor shall thoroughly read all specifications and plans and thoroughly review all abatement documents (i.e. ACM and LBP Investigation Reports) prior to commencement of abatement activities.**
2. **Mechanical systems piping and ductwork on drawing are shown to demonstrate the general layout and are a schematic representation. Not all Thermal Systems Insulation (TSI) is shown on drawings (i.e. vertical pipe runs may be hidden in closed chases).**
3. **As a function of the overall renovations all mechanical, electrical, plumbing and HVAC systems found throughout the Pendleton Wing of the building are to be demolished and removed from the building. Contractor shall coordinate with the GC to ensure that only facilities designated to be demolished are removed.**
4. **The Contractor shall be responsible for verification of all site conditions and quantities associated with the abatement prior to the bid. Contractor shall utilize estimated ACM quantities listed herein for base bid. Actual quantities shall be documented and confirmed during the abatement operations by the Contractor and Owner's Representative.**
5. **Contractor shall thoroughly clean areas where abatement is to occur prior to abatement operations.**
6. **Contractor is to ensure that all governing EPA, the SCDHEC and OSHA regulations are followed during the abatement of the facility.**
7. **Containment shall be established and in place prior to the start of friable abatement activities.**
8. **Negative pressure shall be established prior to start of gross removal during friable abatement activities.**
9. **Existing HVAC supply and return duct systems leading into the abatement work areas shall be cut and capped prior to start of wet removal activities.**

NOTE PICKENS WING

GC, Demolition Contractor and Abatement Contractor shall be aware that joint compound associated with the drywall walls throught Hamilton College is an ACM. Abatement Contractor is to perform all demolition activities and penetrations associated with the existing drywall throughout the building. Contractor is to coordinate locations with the GC to ensure all penetrations and mechanical attachments to the existing drywall are only performed as part of the asbestos abatement and only by personnel trained and certified to work with ACM.

In addition, suspended ceilings throughout the Pickens Wing are to be removed as a function of the renovations. Perimeter tracking attached to drywall walls shall be removed in areas designated on the drawings and as noted on Demolition Plans D1.1 thru D1.3 by the abatement contractor utilizing procedures as specified in Section 1.5 Subsection A. Item 7 of the specifications. GC shall coordinate these activities to ensure that all work associated with the removal of perimeter suspended ceiling tracking on drywall walls is performed by the Abatement Contractor.

F&ME CONSULTANTS
GEOTECHNICAL - ENVIRONMENTAL - MATERIALS
COLUMBIA, SOUTH CAROLINA
F&ME CONSULTANTS, INC.
3112 Devine Street
Columbia, S.C. 29205
Telephone: (803) 254-4540
Facsimile: (803) 254-4542
gellen@fmecol.com

GLYNN M. ELLEN
ASBESTOS CONSULTANT PROJECT DESIGNER
SCDHEC LICENSE NO: PD-00098
EXPIRES: 06/13/2014

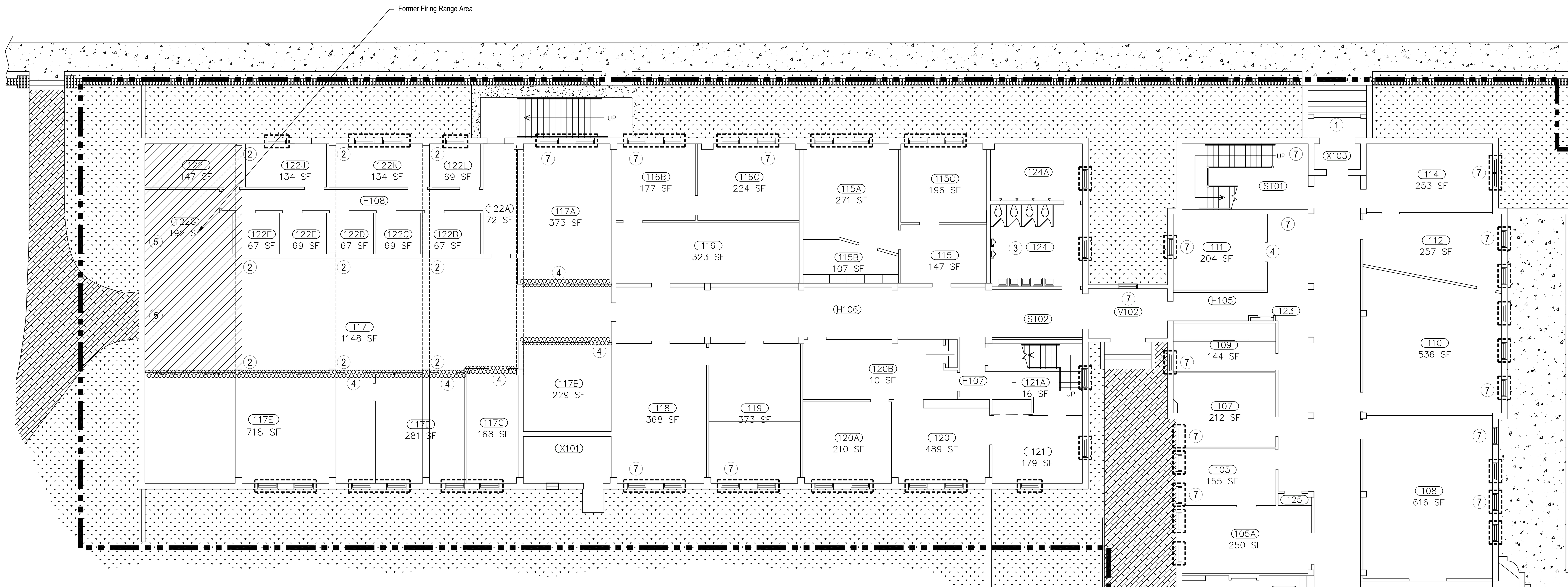
PROJECT TITLE:
HAMILTON COLLEGE RENOVATIONS
USC BUILDING NO: 016
UNIVERSITY OF SOUTH CAROLINA
STATE PROJECT NUMBER H27-9905-PM
CONSTRUCTION DOCUMENTS

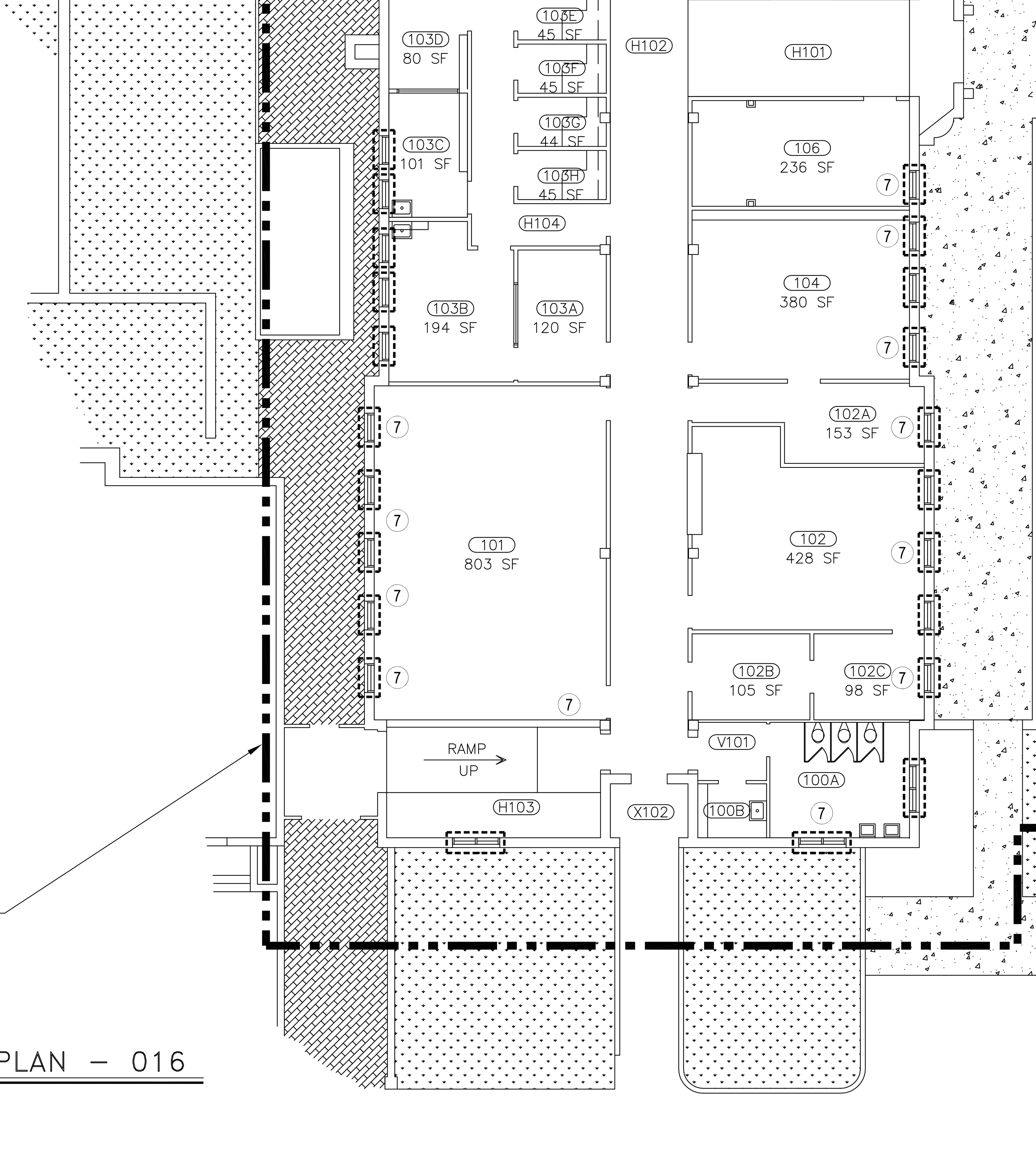
DRAWING: AB-3	DATE: 1/30/14	DRAWN BY: GME	CHECKED BY: JLS
REV.	DESCRIPTION	DATE	ORIG. BY	DRAWN BY
#1	Revisions for Adendum #3	5-08-14	GME	GME

THIS DRAWING AND ASSOCIATED ABATEMENT DESIGN HAS BEEN PREPARED BY GLYNN M. ELLEN ABATEMENT PROJECT DESIGNER SCDHEC LICENSE NO: PD-00098

SHEET TITLE:
ASBESTOS ABATEMENT PLAN
THIRD FLOOR LEVEL

SHEET:
AB-3





Limits of LBP Chips and ACM Glazing Debris Clean-up Around Exterior Perimeter of Building

LEGEND

- [dashed box] Lead-Based Paint on Exterior Windows and Associated Trim to be Removed as a Component of Historic Window Restoration
- (1) Exterior Stair Handrails Coated with Lead-Based Paint to be Removed and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
- (2) Lead-Based Paint to be Removed from Concrete Column down to Bare Concrete and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
- (3) All Plumbing Fixtures in Space (i.e toilets, sinks and urinals) are Coated with Lead-Based Glazing. Contractor to Remove all Fixtures Intact and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
- (4) Door and Door Casing Coated with Lead-Based Paint. Contractor to Remove Door and Associated Components and Segregate from General Demolition Debris and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
- (5) Lead-Based Paint to be Removed from Wall Surface down to Bare Concrete Prior to Demolition of Wall for Proposed New Wall Opening. All Materials Generated shall be Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements . All Hazardous Materials Generated to be Turned over to USC HAZMAT for Disposal.
- (6) Existing Handrails Coated with Lead-Based Paint to be Removed and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
- (7) Existing Radiant Heater Coated with Lead-Based Paint to be Removed Intact and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
- (8) Existing Chalkboard Framing Coated with Lead-Based Paint to be Removed Intact and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
- (9) Prior to Installation of Mechanical Attachments and Application of Shotcrete Loose Flaking and/ or Peeling Lead-Based Paint Shall be Removed from Wall Surfaces. All Residual Paint Chips and Debris Generated Shall be Removed and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
- [wavy line] Wall Coated with Lead-Based Paint. Contractor to Demolish Wall in its Entirety. Contractor Shall Remove and Dispose of all Demolition Debris Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
- [dashed lines] Lead-Based Paint to be Removed from Concrete Beam down to Bare Concrete and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
- [brick hatch] Contractor to Remove all Visible ACM and LBP Chips and Debris from Surface of Brick Walkways within the Limits of Exterior Perimeter Clean-up
- [concrete hatch] Contractor to Remove all Visible ACM and LBP Chips and Debris from Surface of Concrete Patios and Sidewalks within the Limits of Exterior Perimeter Clean-up
- [grass hatch] Contractor to Remove all Visible ACM and LBP Chips and Debris from Surface of Grassed Areas within the Limits of Exterior Perimeter Clean-up. until no visible ACM and LBP is Present or to the Satisfaction of the Owners Representative.

NOTE PENDLETON WING

Former Firing Range (1st Floor) - All painted, non-painted surfaces and building components, walls floors and ceilings, within the hatched area noted in the former firing range are either coated with lead-based paint and/or contaminated from residual lead from former firing range. Contractor is to remove all materials within this area and dispose of as lead containing waste. Includes all demolition debris from walls, floors, ceilings, light fixtures and firing range backstop. All painted surfaces that are to remain, to include walls, floors and ceilings shall require abatement of lead-based paint down to the original substrate. All non-painted surfaces within this area shall require lead de-contamination. Contractor is required to follow all regulatory requirements for worker protection (OSHA) and disposal (SCDHEC) of lead containing waste and lead contaminated waste. All containers required for proper disposal of hazardous materials shall be provided by the Abatement Contractor. All materials (LBP chips and dust, chemical stripping agents and debris) deemed hazardous shall be turned over to USC HAZMAT for disposal.

Former Gymnasium (2nd Floor) - GC is to be aware that concrete walls, columns and arched structural beams found throughout the gymnasium area are coated with LBP. In some areas, where LBP is found but is not to be abated, areas of flaking LBP were noted on the wall surfaces. GC is to coordinate with Contractor regarding removal of flaking, peeling paint in this area prior to start of construction/ renovation activities in this area, to include the installation of anchors for and the application of shotcrete. All areas to be impacted by the shotcrete operations shall be inspected by the GC and Contractor to determine the extent of the peeling paint conditions. Contractor shall utilize appropriate work practices to perform the loose paint removal, and shall containerize and dispose of debris generated during this task to be turned over to USC HAZMAT for disposal as LBP waste.

GC shall utilize means, methods and workers properly trained to handle LBP during the installation of wall anchors and while making other mechanical connections associated with the proposed shotcrete wall. GC shall take into account and meet all regulatory requirements for worker protection (OSHA) and disposal (SCDHEC). Prior to start of anchor installation, GC shall provide or develop a NEA for performing this task.

Furthermore, the impact from initial shotcrete application has the potential for disturbing LBP that is to be encapsulated behind the shotcrete wall. For this reason, GC shall coordinate with shotcrete contractor to ensure that personnel performing this work have the appropriate training to work with LBP and are wearing appropriate PPE. Prior to start of shotcrete application, GC shall provide or develop a NEA for performing this task. GC shall also be aware that there is a potential for lead contamination of the shotcrete waste due to flaking paint in this area. If excess LBP chips and debris are observed in the shotcrete waste material, the entire shotcrete waste pile may require disposal as a hazardous material as determined by TCLP testing methods.

In addition, GC, Demolition Contractor and Abatement Contractor shall be aware that various other building components within the Interior of the Pendleton Wing are coated with Lead-based Paint (LBP). They are as follows:

- **Concrete Walls, Columns and Beams (Gym)**
- **Plaster Walls**
- **Concrete Beams above Suspended Ceilings (Former Firing Range)**
- **Interior Window Casing, Sashes and Sills (Gym)**
- **Plaster and Concrete Columns**
- **Porcelain Sinks and Toilets**
- **Handrails (3rd Floor Balcony)**
- **Radiant Heaters**

Unless otherwise noted on plans and specifications, all renovation activities that impact building components coated with LBP shall only be performed by personnel properly trained and certified to work with LBP. All components that can be removed intact (i.e. bathroom fixtures and wood trim) shall be removed intact . All materials requiring physical means for removal (plaster, drywall and concrete) shall be removed and segregated from general demolition debris and disposed of as lead containing waste. Contractor shall utilize means and methods that take in to account and meet all regulatory requirements for worker protection (OSHA) and disposal (SCDHEC).

NOTE PICKENS WING

GC, Demolition Contractor and Abatement Contractor shall be aware that various building components within the Interior of the Pickens Wing are coated with Lead-based Paint (LBP). They are as Follows:

- **Plaster, Drywall and Concrete Walls**
- **Doors, Door Jambs and Door Casings**
- **Window Casing, Sashes and Sills**
- **Plaster and Concrete Columns**
- **Baseboards, Chair rails and Wainscoting**
- **Porcelain Sinks and Toilets**
- **Wooden Stalls Room 326**
- **Stair Risers, Steps, Tread Plates and Handrails Stairwell STO1**
- **Radiant Heaters**

All renovation activities that impact building components coated with LBP shall only be performed by personnel properly trained and certified to work with LBP. All components that can be removed intact (i.e. bathroom fixtures and wood trim) shall be removed intact . All materials requiring physical means for removal (plaster, drywall and concrete) shall be removed and segregated from general demolition debris and disposed of as lead containing waste. Contractor shall utilize means and methods that take in to account and meet all regulatory requirements for worker protection (OSHA) and disposal (SCDHEC).

N

FIRST FLOOR PLAN – 016

SCALE: 1/8" = 1.0'

F&ME CONSULTANTS
GEOTECHNICAL - ENVIRONMENTAL - MATERIALS
COLUMBIA, SOUTH CAROLINA
F&ME CONSULTANTS, INC.
3112 Devine Street
Columbia, S.C. 29205
Telephone: (803) 254-4540
Facsimile: (803) 254-4542
gellen@fmecol.com

GLYNN M. ELLEN
ASBESTOS CONSULTANT PROJECT DESIGNER
SCDHEC LICENSE NO: PD-00098
EXPIRES: 06/13/2014

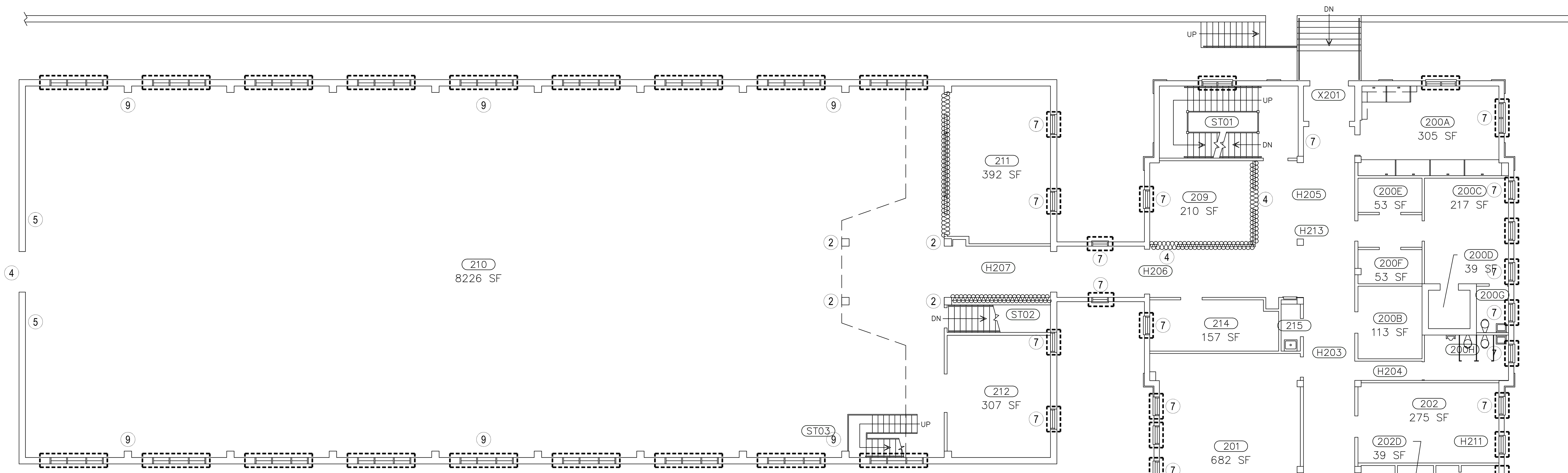
PROJECT TITLE:
HAMILTON COLLEGE RENOVATIONS
USC BUILDING NO: 016
UNIVERSITY OF SOUTH CAROLINA
STATE PROJECT NUMBER H27-9905-PM
CONSTRUCTION DOCUMENTS

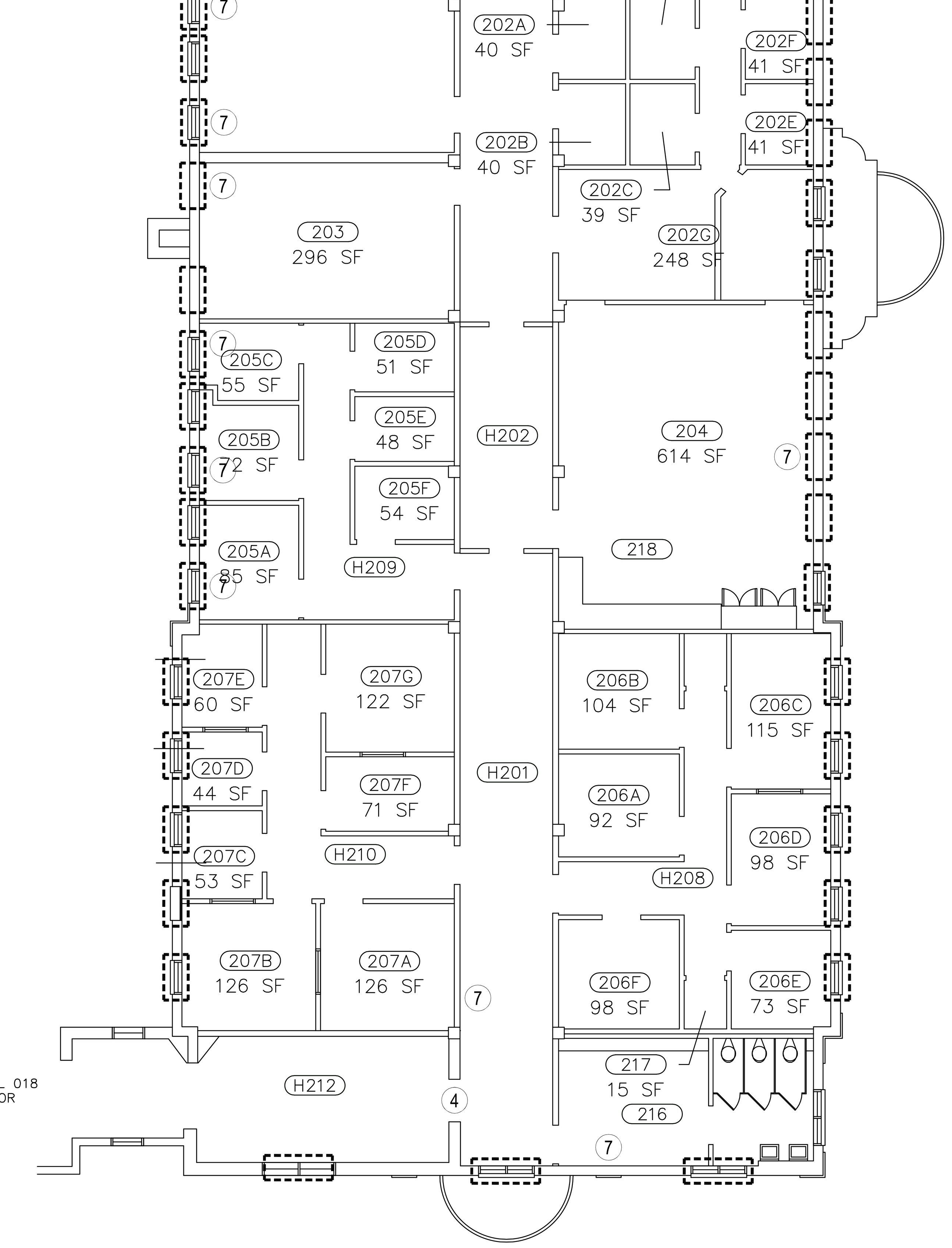
DRAWING:	LBP-1	DATE:	1/30/14	DRAWN BY:	GME	CHECKED BY:	JLS
REV.	DESCRIPTION			DATE		ORIG. BY	DRAWN BY
#1	Revisions for Adendum #3			5-08-14		GME	GME

THIS DRAWING AND ASSOCIATED ABATEMENT DESIGN HAS BEEN PREPARED BY GLYNN M. ELLEN ABATEMENT PROJECT DESIGNER SCDHEC LICENSE NO: PD-00098

SHEET TITLE:
LEAD-BASED PAINT
ABATEMENT PLAN
FIRST FLOOR LEVEL

SHEET:
LBP-1





SECOND FLOOR PLAN – 016

SCALE: 1/8" = 1.0'

LEGEND

- (dashed box) Lead-Based Paint on Exterior Windows and Associated Trim to be Removed as a Component of Historic Window Restoration
- (1) Exterior Stair Handrails Coated with Lead-Based Paint to be Removed and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
- (2) Lead-Based Paint to be Removed from Concrete Column down to Bare Concrete and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
- (3) All Plumbing Fixtures in Space (i.e toilets, sinks and urinals) are Coated with Lead-Based Glazing. Contractor to Remove all Fixtures Intact and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
- (4) Door and Door Casing Coated with Lead-Based Paint. Contractor to Remove Door and Associated Components and Segregate from General Demolition Debris and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
- (5) Lead-Based Paint to be Removed from Wall Surface down to Bare Concrete Prior to Demolition of Wall for Proposed New Wall Opening. All Materials Generated shall be Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements . All Hazardous Materials Generated to be Turned over to USC HAZMAT for Disposal.
- (6) Existing Handrails Coated with Lead-Based Paint to be Removed and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
- (7) Existing Radiant Heater Coated with Lead-Based Paint to be Removed Intact and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
- (8) Existing Chalkboard Framing Coated with Lead-Based Paint to be Removed Intact and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
- (9) Prior to Installation of Mechanical Attachments and Application of Shotcrete Loose Flaking and/ or Peeling Lead-Based Paint Shall be Removed from Wall Surfaces. All Residual Paint Chips and Debris Generated Shall be Removed and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
- (hatched wall) Wall Coated with Lead-Based Paint. Contractor to Demolish Wall in its Entirety. Contractor Shall Remove and Dispose of all Demolition Debris Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
- (dashed lines) Lead-Based Paint to be Removed from Concrete Beam down to Bare Concrete and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements

A B C D E

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

F&ME CONSULTANTS, INC.
3112 Devine Street
Columbia, S.C. 29205
Telephone: (803) 254-4540
Facsimile: (803) 254-4542
gellen@fmecol.com

GLYNN M. ELLEN
ASBESTOS CONSULTANT PROJECT DESIGNER
SCDHEC LICENSE NO: PD-00098
EXPIRES: 06/13/2014

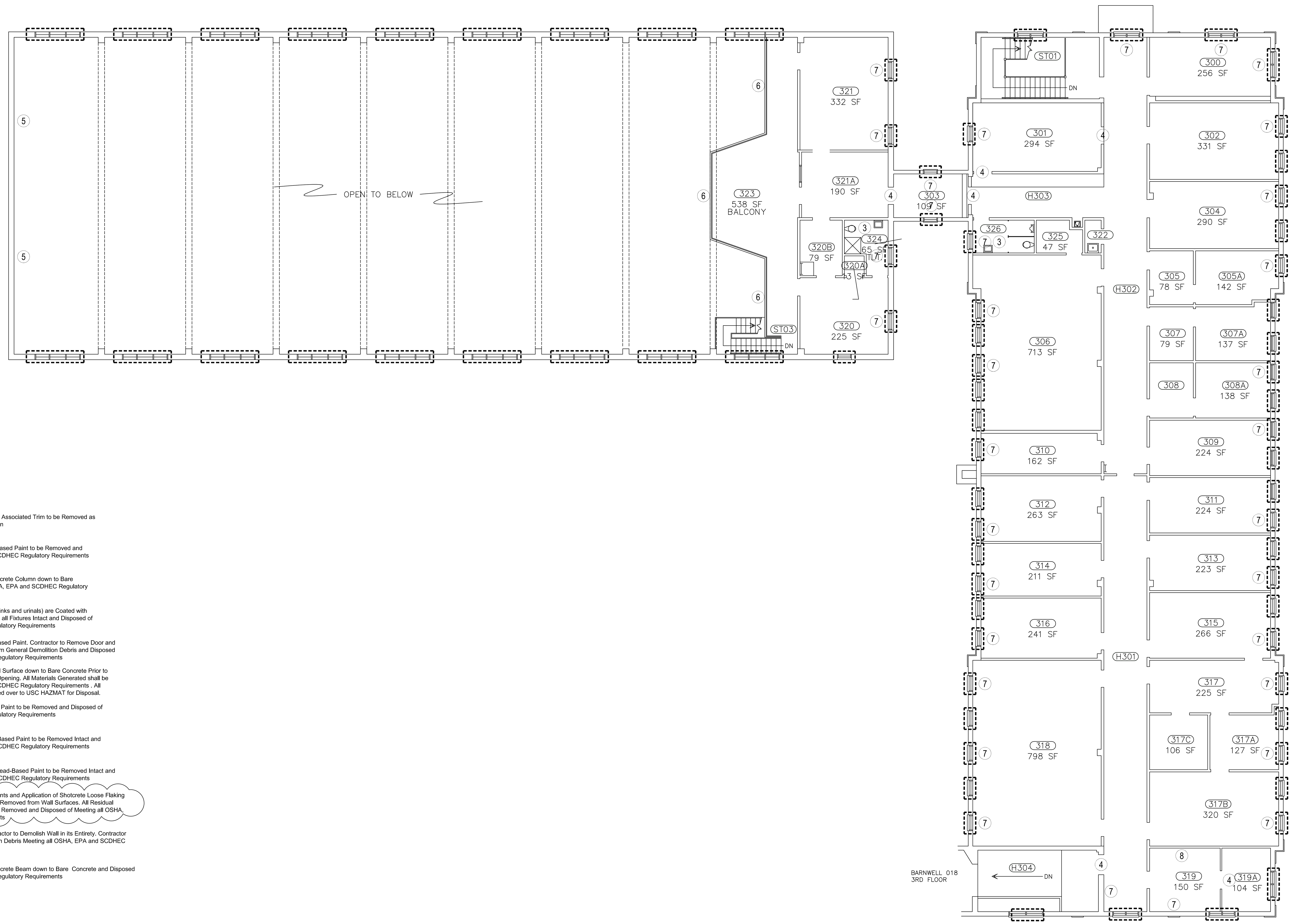
PROJECT TITLE:
HAMILTON COLLEGE RENOVATIONS
USC BUILDING NO: 016
UNIVERSITY OF SOUTH CAROLINA
STATE PROJECT NUMBER H27-9905-PM
CONSTRUCTION DOCUMENTS

DRAWING:	LBP-2	DATE:	1/30/14	DRAWN BY:	GME	CHECKED BY:	JLS
REV.	DESCRIPTION			DATE	ORIG. BY	DRAWN BY	
#1	Revisions for Adendum #3			5-08-14	GME	GME	

THIS DRAWING AND ASSOCIATED ABATEMENT DESIGN HAS BEEN PREPARED BY GLYNN M. ELLEN ABATEMENT PROJECT DESIGNER SCDHEC LICENSE NO: PD-00098

SHEET TITLE:
LEAD-BASED PAINT
ABATEMENT PLAN
SECOND FLOOR LEVEL

SHEET:
LBP-2



N
THIRD FLOOR PLAN – 016
SCALE: 1" = 20'

LEGEND

Symbol	Description
Dashed box	Lead-Based Paint on Exterior Windows and Associated Trim to be Removed as a Component of Historic Window Restoration
1	Exterior Stair Handrails Coated with Lead-Based Paint to be Removed and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
2	Lead-Based Paint to be Removed from Concrete Column down to Bare Concrete and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
3	All Plumbing Fixtures in Space (i.e toilets, sinks and urinals) are Coated with Lead-Based Glazing. Contractor to Remove all Fixtures Intact and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
4	Door and Door Casing Coated with Lead-Based Paint. Contractor to Remove Door and Associated Components and Segregate from General Demolition Debris and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
5	Lead-Based Paint to be Removed from Wall Surface down to Bare Concrete Prior to Demolition of Wall for Proposed New Wall Opening. All Materials Generated shall be Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements . All Hazardous Materials Generated to be Turned over to USC HAZMAT for Disposal.
6	Existing Handrails Coated with Lead-Based Paint to be Removed and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
7	Existing Radiant Heater Coated with Lead-Based Paint to be Removed Intact and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
8	Existing Chalkboard Framing Coated with Lead-Based Paint to be Removed Intact and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
9	Prior to Installation of Mechanical Attachments and Application of Shotcrete Loose Flaking and/ or Peeling Lead-Based Paint Shall be Removed from Wall Surfaces. All Residual Paint Chips and Debris Generated Shall be Removed and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
Hatched wall	Wall Coated with Lead-Based Paint. Contractor to Demolish Wall in its Entirety. Contractor Shall Remove and Dispose of all Demolition Debris Meeting all OSHA, EPA and SCDHEC Regulatory Requirements
Dashed lines	Lead-Based Paint to be Removed from Concrete Beam down to Bare Concrete and Disposed of Meeting all OSHA, EPA and SCDHEC Regulatory Requirements

F&ME
CONSULTANTS
GEOTECHNICAL - ENVIRONMENTAL - MATERIALS
COLUMBIA, SOUTH CAROLINA
F&ME CONSULTANTS, INC.
3112 Devine Street
Columbia, S.C. 29205
Telephone: (803) 254-4540
Facsimile: (803) 254-4542
gellen@fmecol.com

GLYNN M. ELLEN
ASBESTOS CONSULTANT PROJECT DESIGNER
SCDHEC LICENSE NO: PD-00098
EXPIRES: 06/13/2014

PROJECT TITLE:
HAMILTON COLLEGE RENOVATIONS
USC BUILDING NO: 016
UNIVERSITY OF SOUTH CAROLINA
STATE PROJECT NUMBER H27-9905-PM
CONSTRUCTION DOCUMENTS

DRAWING: LBP-3	DATE: 1/30/14	DRAWN BY: GME	CHECKED BY: JLS

REV.	DESCRIPTION	DATE	ORIG. BY	DRAWN BY
#1	Revisions for Adendum #3	5-08-14	GME	GME

THIS DRAWING AND ASSOCIATED ABATEMENT DESIGN HAS BEEN PREPARED BY GLYNN M. ELLEN ABATEMENT PROJECT DESIGNER SCDHEC LICENSE NO: PD-00098

SHEET TITLE:
LEAD-BASED PAINT
ABATEMENT PLAN
THIRD FLOOR LEVEL

SHEET:
LBP-3