PROJECT NOTES:

SCOPE OF WORK

A. This asbestos abatement Project will consist of the removal and disposal of asbestos containing flooring and mastic, replacement of abated tiles with non ACM tiles of similar color, pattern, and size, as well the disconnect and abandoning of asbestos cement ducts associated with the mechanical HVAC system.

B. The work shall include but not be limited to the abatement work tabulated in the H-100 series drawings.

C. The Contractor shall be aware of all conditions of the Project and is responsible for verifying quantities and locations of all Work to be performed. Failure to do so shall not relieve the Contractor of its obligation to furnish all labor and materials necessary to perform the Work.

D. All Work shall be performed in strict accordance with the Project Documents and all governing codes, rules, and regulations. Where conflicts occur between the Project Documents and applicable codes, rules, and regulations, the more stringent shall apply.

E. Working hours shall be as required and approved by the Owner. Asbestos abatement activities including, but not limited to, work area preparation, gross removal activities, cleaning activities, waste removal, etc. may need to be performed during 'off-hours' (including nights and weekends). In addition, multiple mobilizations may be required to perform the work identified in this project. The Contractor shall coordinate and schedule all Work with the facility and Owner's representative.

SPECIAL JOB CONDITIONS

1. The abatement contractor shall confirm the location and quantity of all asbestos removal and, prior to the start of any abatement activities, notify Yonkers Public Schools (YPS) of any inconsistencies with the Bid Documents, as well as any site conditions that were not captured by the Bid Documents that will impact the execution of the work.

2. The schedule for all work at the school must be coordinated with and approved in advance of mobilization by YPS.

3. Mechanical system components that the Contractor may need to access to perform the work of this contract, including oversized ducts, duct enclsoures, and plenum units, are considered confined spaces for purposes of planning and executing abatement work in this area. The Contractor shall submit a Confined Space Entry plan that must be approved by YPS and acknowledged by the local City of Yonkers fire rescue department.

4. The HVAC Contractor shall perform disconnect of electrical and mechanical components of ventilation system units that are being taken out of service. Care shall be taken to avoid disturbance in asbestos cement ducts; the general contractor's asbestos abatement contractor shall make the final disconnection at the asbestos duct, cut the asbestos duct to slab/grade as necessary and cap air tight using galvanized steel or effective equivalent.

5. The abatement contractor shall perform asbestos abatement in a manner consistent with the project specifications as well as all applicable federal, state, and local regulations or as modified by Site Specific Varainces.

6. The Contractor shall be aware of the presence of lead-based paint on all surfaces except those YPS has designated as non-lead-based paint, and apply the appropriate health and safety measures.

7. All work must be coordinated with YPS facility representatives prior to scheduling and mobilization of manpower and resources to the project site.

8. The Contractor shall replace all floor tile removed as part of this abatement using non-asbestos resilient vinyl tiles of similar color, pattern and size. Flooring shall be removed down to the substrate.

9. Abandoned Incinerator Flue is assumed to contain asbestos. Removal shall be performed from the Incinerator Room; flue / flue liner may be secured at roof level and/or intermittently along vertical extension - Contractor is responsible for complete removal of the flue / flue liner as ACM.

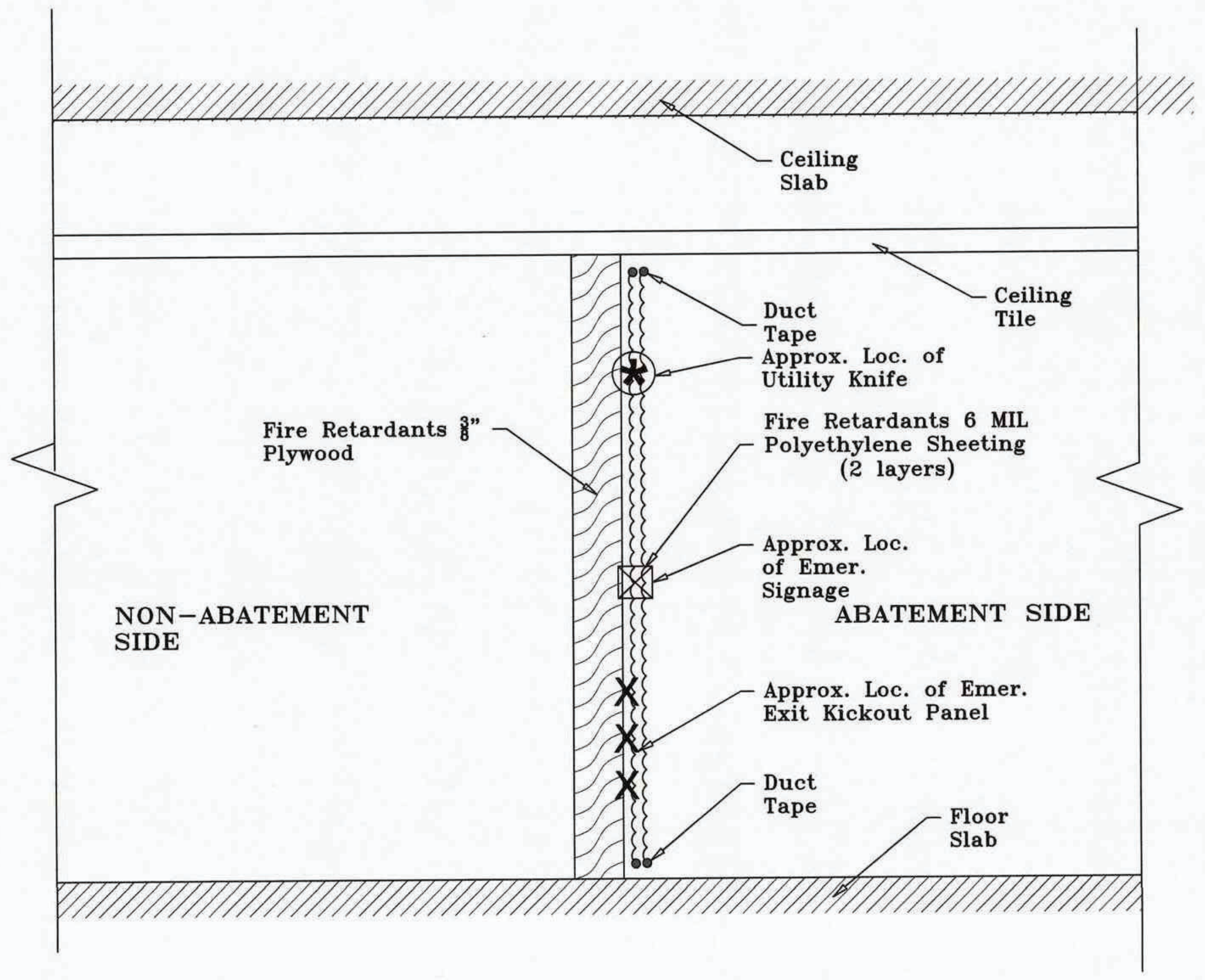
10. For Work Areas 4,5,6 & 7 (H-102), the asbestos cement ducts leading to the unit ventilators shall also be capped & sealed air tight at the subgrade intakes.

ASBESTOS ABATEMENT BASE SCOPE OF WORK TABLE:

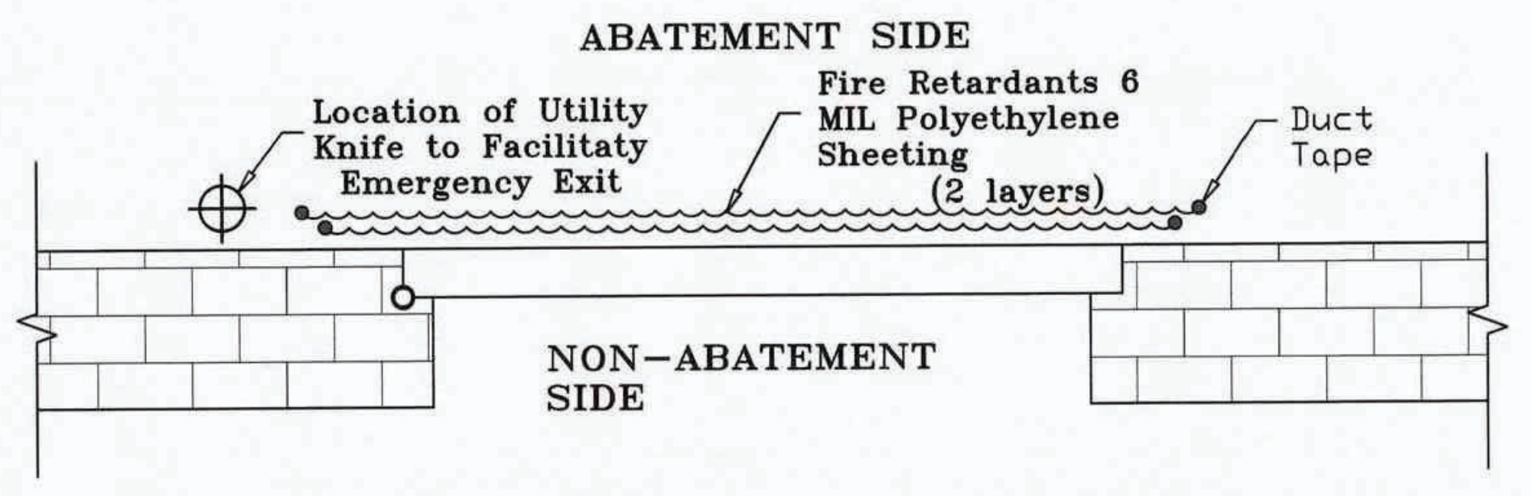
Work Area	Location	Description of Asbestos Material	Approximate Quantity Of ACM	ICR 56 Procedure
1	3rd Floor Library (Corner)	9"x9" Beige Floor Tile and Mastic	200.0 SF	56-11.7
2	1st Floor Mechanical Room	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
3	1st Floor Fan Room	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
4	1st Floor Room 101	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
5	1stFloor Room 102	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
6	1st Floor Room 103/105	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
7	1st Floor Room 106	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
8	1st Floor Faculty Dining	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
9	1st Floor Room 110	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
10	1st Mechanical Room - Incinerator Duct	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
11	1st Floor Old Incincerator Room	Flue / Flue Liner	50.0 LF	56-7.11 (f)
12	2nd Floor Teacher Room	9"x9" Floor Tile and Mastic	550.0 SF	56-11.7
13	2nd Floor Storage Room	9"x9" Floor Tile and Mastic	65.0 SF	56-11.7
		Total	815.0 SF / 50.0 LF	

ASBESTOS ABATEMENT ALTERNATE SCOPE OF WORK TABLE:

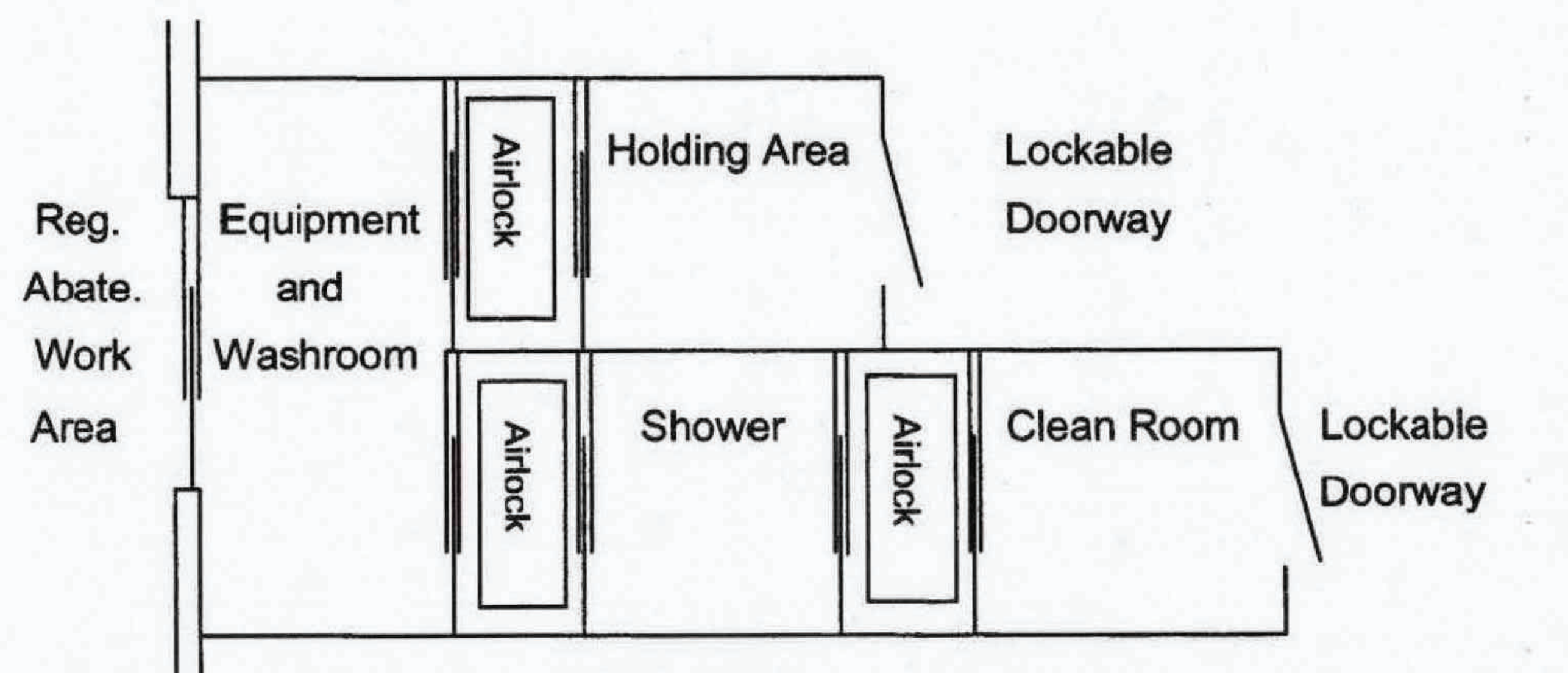
Work Area	Location	Description of Asbestos Material	Approximate Quantity Of ACM	ICR 56 Procedure
A1	3rd Floor Library	9"x9" Beige Floor Tile and Mastic	2,450.0 SF	56-11.7
		Total	5,310.0 SF	



1 H-100A TYPICAL HARD WALL BARRIER AT OPENINGS MORE THAN 32SF
Not To Scale

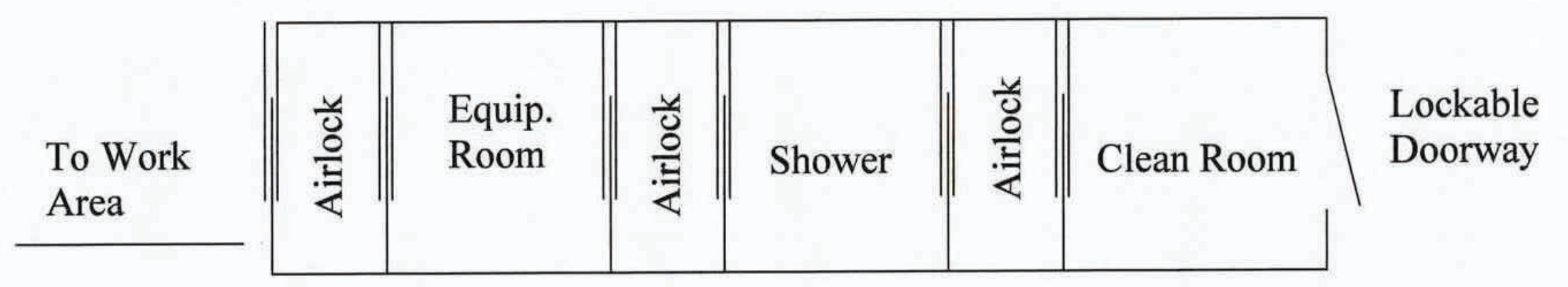


2 H-100A TYPICAL SOFT WALL BARRIER AT OPENINGS LESS THAN 32SF (OPERABLE DOORWAYS)
Not To Scale

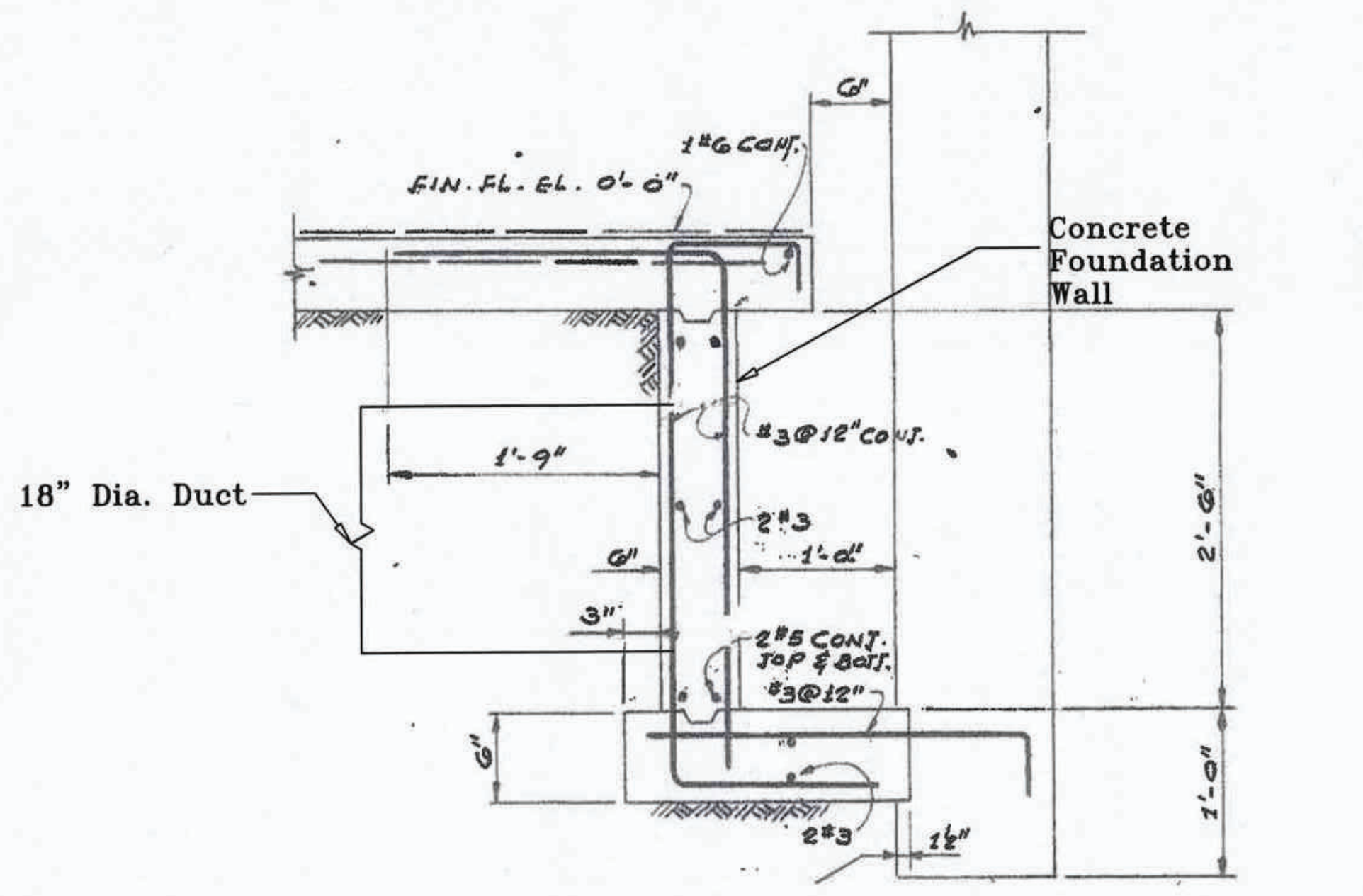


Not to Scale

3 H-100A LARGE PROJECT WORKER/WASTE DECONTAMINATION UNIT
Not To Scale



4 H100A SMALL / MINOR PROJECT WORKER DECONTAMINATION UNIT
Not To Scale



5 H-100A TYPICAL ASBESTOS CEMENT DUCT CONNECTION TO UNIT VENTILATORS
Not To Scale

PROJECT TITLE

SAUNDERS TRADES AND TECHNICAL HIGH SCHOOL HVAC UPGRADES

PROJECT ADDRESS

183 PALMER RD
YONKERS, NY 10701

OWNER

YONKERS PUBLIC SCHOOLS

ARCHITECT

FULLER AND D'ANGELO P.C.
45 KNOLLWOOD ROAD
ELMSFORD, NY 10523
(T) 914.592.4444

MEP ENGINEER AND ENVIRONMENTAL ENGINEER

LiRo Engineers, Inc.
A LiRo Group Company
Syosset, N.Y. 516-214-8157[T]

KEY PLAN: NOT TO SCALE

SHEET SIZE 30X42

REVISION

MARK	DATE	DESCRIPTION

ISSUE

MARK	DATE	DESCRIPTION
	04.17.20	90% CD
1	02.04.21	ADDENDUM 4

SED #: 66-23-00-01-0-206-017
YPS JOB: 10881
DESIGN BY: R. SALERNO- 10-00697
DRAWN BY: S. RAMCHARAN
CHK'D BY: C. ZANONI - 92-16430
COPYRIGHT:
LIRO ENGINEERS, INC.

ENGINEER'S SEAL

PETER JOSEPH GERBASI
No. 070446

IT IS A VIOLATION OF NYS LAW FOR ANY PERSON TO ALTER THIS DOCUMENT IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. IF A DOCUMENT BEARING THE SEAL ON AN ENGINEER IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE DOCUMENT THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET TITLE

SCOPE OF WORK AND DETAILS

H-100A

ASBESTOS PROJECT REQUIREMENTS:

GENERAL

PERMITS AND COMPLIANCE

A. The Contractor shall assume full responsibility and liability for compliance with all applicable Federal, State, and local laws, rules, and regulations pertaining to Work practices, protection of Workers, authorized visitors to the site, persons, and property adjacent to the Work.
B. Perform asbestos related Work in accordance with New York State Industrial Code Rule 56 (herein referred to as Code Rule 56), 40 CFR 61, and 29 CFR 1926. Where more stringent requirements are specified, adhere to the more stringent requirements.
C. The Contractor must maintain current licenses, permits and certifications pursuant to New York State Department of Labor and Department of Environmental Conservation for all Work related to this Project, including the removal, handling, transport, and disposal of asbestos containing materials.
D. The Contractor must have and submit proof upon request that any persons employed by the Contractor to engage in or supervise Work on any asbestos Project have a valid NYS asbestos handling certificate pursuant to Code Rule 56.
E. The Contractor shall comply fully with any Variance secured from regulatory agencies by the Owner in the performance of the Work. Any Variance applications previously submitted are included as an appendix of this specification.
F. The Contractor shall be responsible for obtaining all Variances as may be required for the Project or as requested by the Owner. Approval of the Owner is required prior to submission of a Variance application to any regulatory agency. Failure to obtain Owner approval may result in Owner not permitting variance to be used on the project.
G. The Contractor shall be responsible for compliance with The New York State Uniform Fire Prevention and Building Code, or its successor during all Work at the site.
H. Failure to adhere to the Project Documents shall constitute a breach of the Contract and the Owner shall have the right to and may terminate the Contract provided, however, the failure of the Owner to so terminate shall not relieve the Contractor from future compliance.

SUBMITTALS

A. Pre-Work Submittals: Within 7 days prior to the pre-construction conference, the Contractor shall submit 3 copies of the documents listed below for review and approval prior to the commencement of asbestos abatement activities:
  1. Contractor license issued by New York State Department of Labor.
  2. Progress Schedule:
    a. Show the complete sequence of abatement activities and the sequencing of Work within each building or building section.
    b. Show the dates for the beginning and completion of each major element of Work including substantial completion dates for each Work Area, building, or phase.
  3. Project Notifications: As required by Federal and State regulatory agencies together with proof of transmittal (i.e. certified mail return receipt).
  4. Building Occupant Notification: As required by regulatory agencies.
  5. Abatement Work Plan: Provide plans that clearly indicate the following:
    a. All Work Areas/containments numbered sequentially.
    b. Locations and types of all decontamination enclosures.
    c. Entrances and exits to the Work Areas/containments'. Type of abatement activity/technique for each Work Area/containment.
    e. Number and location of negative air units and exhaust. Also provide calculations for determining number of negative air pressure units.
    f. Location of water and electrical connections to building services.
    g. Waste transport routes through the building to the waste storage container.
  7. Disposal Site/Landfill Permit from applicable regulatory agency.
  8. NYS Department of Environmental Conservation Waste Transporter Permit.
B. Project Close-out Submittals: Within 30 days of the completion of each abatement phase, the Contractor shall submit one copy of the documents listed below to the owner's environmental consultant for review and approval prior to Contractor's final payment. Once the close-out submittal is approved, the Contractor shall provide three sets of the approved close-out documents (double-sided and bound) to owner's representative.
  1. All waste disposal manifests and disposal logs (Original waste manifests shall be sent to the owner's representative.
  2. OSHA compliance air monitoring records conducted during the Work.
  3. Daily progress log, including the entry/exit log.
  4. Disposal Site/Landfill Permit from applicable regulatory agency.
  5. Project notifications, amended notifications, Variances.

PRE-CONSTRUCTION CONFERENCE

A. Prior to start of preparatory Work under this Contract, the Contractor shall attend a pre-construction conference attended by Owner, Facility Personnel, and Environmental Consultant.
B. Agenda for this conference shall include but not necessarily be limited to:
  1. Contractor's scope of Work, Work plan, and schedule to include number of workers and shifts.
  2. Contractor's safety and health precautions including protective clothing and equipment and decontamination procedures.
  3. Environmental Consultant's duties, functions, and authority.
  4. Contractor's Work procedures including:
    a. Methods of job site preparation and removal methods.
    b. Respiratory protection.
    c. Disposal procedures.
    d. Cleanup procedures.
    e. Fire exits and emergency procedures.
  5. Contractor's required pre-work and on-site submittals, documentation, and postings.
  6. Contractor's plan for twenty-four (24) hour Project security both for prevention of theft and for barring entry of unauthorized personnel into Work Areas.
  7. Temporary utilities.
  8. Handling of furniture and other moveable objects.
  9. Storage of removed asbestos containing materials.
  10. Waste disposal requirements and procedures, including use of the Owner supplied waste manifest.
C. In conjunction with the conference the Contractor shall accompany the Owner and Environmental Consultant on a pre-construction walk-through documenting existing condition of finishes and furnishings, reviewing overall Work plan, location of fire exits, fire protection equipment, water supply and temporary electric tie-in.

APPLICABLE STANDARDS AND REGULATIONS

A. The Contractor shall comply with the following codes and standards, except where more stringent requirements are shown or specified:
B. Federal Regulations:
  1. 29 CFR 1910.1001, "Asbestos" (OSHA)
  2. 29 CFR 1910.1200, "Hazard Communication" (OSHA)
  3. 29 CFR 1910.134, "Respiratory Protection" (OSHA)
  4. 29 CFR 1910.145, "Specification for Accident Prevention Signs and Tags" (OSHA)
  5. 29 CFR 1926, "Construction Industry" (OSHA)
  6. 29 CFR 1926.1101, "Asbestos, Tremolite, Anthophyllite, and Actinolite" (OSHA)
  7. 29 CFR 1926, Subpart AA (1200 through 1213)
  8. 29 CFR 1926.500 "Guardrails, Handrails and Covers" (OSHA)
  9. 40 CFR 61, Subpart A, "General Provisions" (EPA)
  10. 40 CFR 61, Subpart M, "National Emission Standard for Asbestos" (EPA)
  11. 40 CFR 763, Appendix A to Subpart E, "Interim TEM Analytical Methods"
  12. 49 CFR 171-172, Transportation Standards (DOT)
C. New York State Regulations:
  1. 12 NYCRR, Part 56, "Asbestos", Industrial Code Rule 56 (DOL)
  2. 6 NYCRR, Parts 360, 364, Disposal and Transportation (DEC)
  3. 10 NYCRR, Part 73, "Asbestos Safety Program Requirements" (DOH)
  4. "New York State Uniform Fire Prevention and Building Code"
D. Standards and Guidance Documents:
  1. American National Standard Institute (ANSI) Z88.2-80, Practices for Respiratory Protection
  2. ANSI Z9.2_79, Fundamentals Governing the Design and Operation of Local Exhaust Systems
  3. EPA 560/585_024, Guidance for Controlling Asbestos Containing Materials in Buildings (Purple Book)
  4. EPA 530-SW-85-007, Asbestos Waste Management Guidance
  5. ASTM Standard E1368 "Standard Practice for Visual Inspection of Asbestos Abatement Projects"

NOTICES

A. The Contractor shall provide notification of intent to commence asbestos abatement activities as indicated below.
  1. At least ten (10) Working days prior to beginning abatement activities, send written notification to:

U.S. Environmental Protection Agency
National Emissions Standards for Hazardous Air Pollutants (NESHAPS) Coordinator
26 Federal Plaza
New York, NY 10007

  2. At least ten (10) days prior to beginning abatement activities send written notification to:

New York State Department of Labor
Division of Safety and Health, Asbestos Control Program.
State Office Campus
Building 12 - Room 161B
Albany, NY 12240

B. The Contractor is required to send notifications to regulatory agencies via electronic, mail, or package delivery service that will provide proof of delivery and receipt.
C. The Contractor shall be responsible for maintaining current project filings with regulatory agencies for the duration of the project.
D. The Contractor shall post and/or provide Building Occupant Notification at least 10 days prior to beginning abatement activities as required by Code Rule 56.

CONTRACTOR AIR SAMPLING

A. In addition to the requirements of OSHA 1926.1101, the Contractor shall be required to perform personal air monitoring every Work shift in each Work Area during which abatement activities occur in order to determine that appropriate respiratory protection is being worn and utilized.
B. The Contractor shall conduct air sampling that is representative of both the 8-hour time weighted average and 30-minute short-term exposures to indicate compliance with the permissible exposure and excursion limits.
C. The Contractor's laboratory analysis of air samples shall be conducted by an NYS DOH ELAP approved laboratory. The consultant shall not collect or analyze the Contractor's air samples.
D. Results of personnel air sample analyses shall be available, verbally, within twenty-four (24) hours of sampling and shall be posted upon receipt. Written laboratory reports shall be delivered and posted at the Work site within five (5) days. Failure to comply with these requirements may result in all work being stopped until compliance is achieved.

PROJECT SUPERVISOR

A. The Contractor shall designate a full-time Project Supervisor who shall meet the following qualifications:
  1. The Project Supervisor shall hold New York State certification as an Asbestos Supervisor.
  2. The Project Supervisor shall meet the requirements of a "Competent Person" as defined by OSHA 1926.1101 and shall have a minimum of one year experience as a supervisor.
  3. The Project Supervisor must be able to speak, read, and write English fluently, as well as communicate in the primary language of the Workers.
B. If the Project Supervisor is not on-site at any time whatsoever, all Work shall be stopped. The Project Supervisor shall remain on-site until the Project is complete. The Contractor may not remove the Project Supervisor from the Project without the written consent of the Owner and the Environmental Consultant; however the Project Supervisor shall be removed from the Project if so requested by the Owner.
C. The Project Supervisor shall maintain the bound Daily Project Log and the entry/exit logs as required by New York State Department of Labor and section 2.03 of the specifications and the Waste Disposal Log (Appendix B) required by section 4.03 of the specifications.
D. The Project Supervisor shall be responsible for the performance of the Work and shall represent the Contractor in all respects at the Project site. The Supervisor shall be the primary point of contact for the Asbestos Project Monitor.

DELIVERY AND STORAGE

A. Deliver all materials to the job site in original packages with containers bearing manufacturer's name and label.
B. Store all materials at the job site in a suitable and designated area.
  1. Store materials subject to deterioration or damage away from wet or damp surfaces and under cover.
  2. Protect materials from unintended contamination and theft.
  3. Storage areas shall be kept clean and organized.
C. Remove damaged or deteriorated materials from the job site. Materials contaminated with asbestos shall be disposed of as asbestos debris as herein specified. This includes unused Contractor supplies located in the regulated work area.

TEMPORARY UTILITIES

A. Shut down and lock out all electrical power to the asbestos Work Areas, including lighting circuits. Any electrical power passing through the Work Areas that can't be shut down due to health and safety reasons, shall be protected as per the requirements of Industrial Code Rule 56.
B. Provide temporary 120-240 volt, single phase, three wire, 100 amp electric service with Ground Fault Circuit Interrupters (GFCI) for all electric requirements within the asbestos Work Area.
  1. Where available, obtain from Owner's existing system. Otherwise provide power from other sources (i.e. generator).
  2. Provide temporary wiring and "weatherproof" receptacles in sufficient quantity and location to serve all HEPA equipment and tools.
  3. Provide wiring and receptacles as required by the Environmental Consultant for project monitoring and air sampling equipment (pumps, fans, leaf blowers, etc.).
  4. All power to the Work Area shall be brought in from outside the area through GFCI's at the source.
C. Provide temporary lighting with "weatherproof" fixtures for all Work Areas including decontamination chambers.
  1. The entire Work Area shall be kept illuminated at all times.
  2. Provide lighting as required by the Environmental Consultant for the purposes of performing required inspections.
D. All temporary devices and wiring used in the Work Area shall be capable of decontamination procedures including HEPA vacuuming and wet-wiping.
E. Utilize domestic water service, if available, from Owner's existing system. Provide hot water heaters with sufficient capacity to meet Project demands.

PRODUCTS

DAILY PROJECT LOG & WORK AREA ENTRY/EXIT LOG

A. Provide a bound Daily Project Log. The log shall contain on title page the Project name; name, address and phone number of Owner; name, address and phone number of Environmental Consultant; name, address and phone number of Abatement Contractor; emergency numbers including, but not limited to local Fire/Rescue department and all other New York State Department of Labor requirements.
B. All entries into the log shall be made in non-washable, permanent ink and such pen shall be strung to or otherwise attached to the log to prevent removal from the log-in area. Under no circumstances shall pencil entries be permitted.
C. All persons entering and exiting the Work Area shall sign the entry/exit log and include name, certification number, and time.
D. The Project Supervisor shall document all Work performed daily and note all inspections required by Code Rule 56, i.e. testing and inspection of barriers and enclosures.

SCAFFOLDING AND LADDERS

A. Provide all scaffolding and/or staging as necessary to accomplish the Work of this Contract. Scaffolding may be of suspension type or standing type such as metal tube and coupler, tubular welded frame, pole or outrigger type or cantilever type. The type, erection and use of all scaffolding and ladders shall comply with all applicable OSHA construction industry standards.
B. Provide scaffolding and ladders as required by the Environmental Consultant for the purposes of performing required inspections.

SURFACTANT (AMENDED WATER)

A. Wet all asbestos-containing materials prior to removal with surfactant mixed and applied in accordance with manufacturer's printed instructions.

WASTE DISPOSAL BAGS, DRUMS, AND CONTAINERS

A. Provide 6 mil polyethylene disposal bags printed with asbestos caution labels. Bags shall also be imprinted with U.S. Department of Transportation required markings.
B. Provide 30 or 55 gallon capacity fiber, plastic, or metal drums capable of being sealed air and water tight if asbestos waste has the potential to damage or puncture disposal bags. Affix asbestos caution labels on lids and at one-third points around drum circumference to assure ready identification.
C. Containers and bags must be labeled accordance with 40 CFR Part 61 NESHAPS and Code Rule 56. When the bags/containers are moved to the holding area, lockable trailer, or lockable hardtop dumpster from the waste decontamination system washroom, each bag/container must also be appropriately labeled with the date moved in waterproof markings.
D. Labeled ACM waste containers or bags shall not be used for non-ACM waste or trash. Any material placed in labeled containers or bags, whether turned inside out or not shall be handled and disposed of as ACM waste.

FIRE RETARDANT PLASTIC SHEETING

A. All polyethylene (plastic) sheeting used on the Project (including but not limited to sheeting used for critical and isolation barriers, fixed objects, walls, floors, ceilings, waste container) shall be at least 6 mil fire retardant sheeting.
B. Decontamination enclosure systems shall utilize at least 6 mil opaque fire retardant plastic sheeting. At least 2 layers of 6 mil reinforced fire retardant plastic sheeting shall be used for the flooring.

EXECUTION

GENERAL REQUIREMENTS

A. Should visible emissions or water leaks be observed outside the Work Area, immediately stop Work and institute emergency procedures per Code Rule 56. Should there be elevated fiber levels outside the Work Area, immediately stop Work, institute emergency procedures per Code Rule 56, and notify all employers and occupants in adjacent areas. All costs incurred in decontaminating such non-Work Areas and the contents thereof shall be borne by the Contractor, at no additional cost to the Owner
B. Valid NYS DOL Asbestos Handler certification cards shall be on site prior to admittance of any Contractor's employees to the asbestos Work Area.
C. The following submittals, documentation, and postings shall be maintained on-site by the Contractor during abatement activities at a location approved by the Abatement Project Monitor:
  1. Valid Contractor handling license issued by New York State Department of Labor.
  2. NYS DOL Asbestos Handler certification cards for each person employed in the removal, handling, or disturbance of asbestos.
  3. Daily OSHA personal air monitoring results.
  4. NYS Department of Health ELAP certification for the laboratory that will be analyzing the OSHA personnel air samples.
  5. NYS Department of Environmental Conservation Waste Transporter Permit.
  6. Project documents (specifications and drawings.)
  7. Notifications, Variances, Approved Work Plan. Ensure that the most up-to-date notifications and Variances are on-site.
  8. Applicable regulations.
  9. Material Safety Data Sheets of supplies/chemicals used on the Project.
  10. Disposal Site/Landfill Permit from applicable regulatory agency.
  11. List of emergency telephone numbers.
  12. Magnahelic manometer semi-annual calibration certification.
  13. Waste Disposal Log.
  14. Daily Project Log.
  15. Entry/Exit Logs.
D. The following documentation shall be maintained on-site by the Abatement Project Monitor during abatement activities:
  1. Valid Contractor handling license issued by New York State Department of Labor.
  2. Air Sample Log.
  3. Air sample results.
  4. Project Monitor Daily Log
  5. Asbestos Survey Report.
  6. A copy of ASTM Standard E1368 "Standard Practice for Visual Inspection of Asbestos Abatement Projects."
  7. Calibration chart for rotometer(s) used on-site.
E. The Work Area must be vacated by building occupants prior to decontamination enclosure construction and Work Area preparation.
F. All demolition necessary to access asbestos containing materials for removal must be conducted within negative pressure enclosures by licensed asbestos handlers. Demolition debris may be disposed of as construction and demolition debris provided the Abatement Project Monitor determines that it is not contaminated with asbestos and there has been no disturbance of ACM within the enclosure. If the demolition debris is determined to be contaminated or ACM has been disturbed, it must be disposed of as asbestos waste.

WORK AREA PREPARATION

A. Asbestos danger signs shall be posted at all approaches to the asbestos Work Area. Post all emergency exits as emergency exits only on the Work Area side, post with asbestos caution signs on the non-Work Area side. Provide all non-Work Area stairs and corridors accessible to the asbestos Work Area with warning tapes at the base of stairs and beginning of corridors. Warning tapes shall be in addition to caution signs
B. Shut down and lock out the building heating, ventilating, and air conditioning systems. Electrical systems and circuits shall also be shut down unless permitted to remain active per Code Rule 56 and appropriately protected and labeled. Existing lighting sources shall not be utilized. Provide temporary electric power and lighting as specified herein.
C. All non-ACM surfaces and objects within the Work Area shall be pre-cleaned using HEPA vacuuming and/or wet-wiping methods. Dry sweeping and any other methods that raise dust shall be prohibited. ACM shall not be disturbed during pre-cleaning.
D. Movable objects within the Work Area shall be HEPA vacuumed and/or wet-wiped and removed from the Work Area.
E. All non-movable equipment in the Work Area shall be completely covered with 2 layers of fire retardant plastic sheeting, at least 6 mil in thickness, and secured in place with duct tape and/or spray adhesive. Active Fire Protection System components in the Work Area shall not be covered with fire retardant plastic sheeting or any other obstruction.
F. Provide enclosure of the asbestos Work Area necessary to isolate it from unsealed areas of the building in accordance with the approved asbestos Work plan and as specified herein.
G. Provide critical barriers by sealing off all openings including but not limited to operable windows and skylights, doorways, diffusers, grills, electrical outlets and boxes, doors, floor drains, and any other penetrations to surfaces in the Work Area enclosure, using 2 layers of at least 6 mil fire retardant plastic sheeting.
H. Provide isolation barriers by installing temporary framing and sheathing at openings larger than 32 square feet forming the limits of the asbestos Work Area. Sheathing thickness must be a minimum of 3/8 inch and all sheathing shall be caulked and the Work Area side sealed with two layers of 6 mil fire retardant plastic sheeting. Isolation barriers in stairwells and at work area egress locations shall not be covered with sheathing, only two layers of 6 mil fire retardant plastic sheeting.
I. Isolation barriers shall be installed at all elevator openings in the Work Area. .Elevators running through the regulated abatement work area shall be shut down or isolated as per Code Rule 56. Elevator controls shall be modified so that elevators bypass the Work Area
J. Provide two independent layers of 6 mil fire retardant plastic sheeting over all floor, wall, and ceiling surfaces. Isolation barriers shall also be covered with two independent layers (for a total of four layers). Sheeting shall be secured with duct tape. All joints in fire retardant plastic sheeting shall overlap 12" minimum. Carpeting left in place shall be covered with 3/8 inch plywood sheathing prior to plasticizing.
K. Unless otherwise specified for removal, the Contractor shall either protect all fiberglass insulation on piping, ductwork, tanks, etc. in the Work Area using two layers of six mil fire retardant plastic sheeting or remove the insulation as asbestos containing waste. If the Contractor elects to remove the fiberglass insulation as asbestos-contaminated, he/she shall be responsible for reinsulation if reinsulation of removed insulations is part of the Contract or Project.

L. Frame out emergency exits from Work Area. Provide double layer 6 mil fire retardant plastic sheeting and tape seal opening. Post as emergency exits only and tape utility knife to the Work Area side of each exit. Within the Work Area, mark the locations and directions of emergency exits throughout the Work Area using exit signs and/or duct tape.
M. Remove all items attached to or in contact with ACM only after the Work Area enclosure is in place. HEPA vacuum and wet wipe with amended water all items prior to their removal from the Work Area and before the start of asbestos removal operations.
N. Suspended ceiling tiles shall only be removed after Work Area preparation is complete. If possible, non-contaminated ceiling tiles shall be HEPA vacuumed and removed from the Work Area before asbestos removals begin. Contaminated ceiling tiles shall be disposed of as asbestos waste.

NEGATIVE AIR PRESSURE FILTRATION SYSTEM

A. Provide a portable asbestos filtration system that develops a minimum pressure differential of negative 0.02 in. of water column within all full enclosure areas relative to adjacent unsealed areas and that provides a minimum of 4 air changes per hour in the Work Area during abatement and 6 air changes for non-friable flooring and/or mastic removal.
B. Such filtration systems must be made operational after critical and isolation barriers are installed but before wall, floor, and ceilings are plasticized and shall be operated 24 hours per day during the entire Project until the final cleanup is completed and satisfactory results of the final air samples are received from the laboratory.
C. The system shall include a series of pre_filters and filters to provide High Efficiency Particulate Air (HEPA) filtration of particles down to 0.3 microns at 100% efficiency and below 0.3 microns at 99.9% efficiency. Provide sufficient replacement filters to replace pre_filters every 2 hours, secondary pre_filters every 24 hours, and primary HEPA filters every 600 hours (25 continuous days) of operation. HEPA filter sides shall be marked with installation date during all new HEPA filter installations on project.
D. A minimum of one additional filtration unit of at least the same capacity as the primary unit(s) shall be installed and fully functional to be used during primary unit (s) filter changing and in case of primary failure.
E. At no time will the unit exhaust indoors, within 15 feet of a receptor, including but not limited to windows and doors, or adversely affect the air intake of the building. Exhaust ducting shall not exceed 25' in length, except as allowed by Industrial Code Rule 56. Provide construction fencing at ground level exhaust termination locations per Code Rule 56.
F. Upon electric power failure or shut_down of any filtration unit, all abatement activities shall stop immediately and only resume after power is restored and all filtration units are fully operating. For shut_downs longer than one hour, all openings into the Work Area, including the decontamination enclosures, shall be sealed.
G. For all OSHA Class I removal Work Areas, the Contractor shall provide a manometer to verify negative air pressure. Manometers shall be read twice daily and recorded within the Daily Project Log.
H. There shall be at least a 4 hour settling period after the Work Area is fully prepared and the negative filtration units have been started to ensure integrity of the barriers.
I. Once installed and operational, the Contractor's Supervisor shall conduct daily inspections of the Work Area to insure the airtight integrity of the enclosure and operation of the negative air system. Findings shall be recorded within the Daily Project Log. Inspections shall also be conducted on days when no abatement activities are in progress per Code Rule 56 (i.e. weekends).

REMOVAL OF ASBESTOS CONTAINING MATERIALS

A. Asbestos-containing materials shall be removed in accordance with the Contract Documents and the approved Asbestos Work Plan. Only one type of ACM shall be abated at a time within a Work Area. Where there are multiple types of ACM requiring abatement, Code Rule 56 procedures for sequential abatement shall be followed.
B. Sufficiently wet asbestos materials with a low pressure, airless fine spray of surfactant to ensure full penetration prior to material removal. Re-wet material that does not display evidence of saturation.
C. One Worker shall continuously apply amended water while ACM is being removed.
D. Perform cutting, drilling, abrading, or any penetration or disturbance of asbestos containing material in a manner to minimize the dispersal of asbestos fibers into the air. Use equipment and methods specifically designed to limit generation of airborne asbestos particles. All power operated tools used shall be provided with manufacturer HEPA equipped filtered local exhaust ventilation, as required by regulation.
E. Upon removal of ACM from the substrate, the newly exposed surfaces shall be HEPA vacuumed and/or wet cleaned. Surfaces must be thoroughly cleaned using necessary methods and any required solvents to completely remove any adhesive, mastic, etc.
F. All removed material shall be placed into 6 mil plastic disposal bags or other suitable container upon detachment from the substrate. Cleanup of accumulations of loose debris or waste shall be performed whenever there is enough accumulation to fill a single bag or container and minimally at the end of each work shift.
G. Large components shall be wrapped in two layers of 6 mil fire retardant plastic sheeting. Sharp components likely to tear disposal bags shall be placed in fiber drums or boxes and then wrapped with sheeting.
H. Power or pressure washers are not permitted for asbestos removal or clean-up procedures unless approved in a Site Specific Variance and allowed by owner.
I. All open ends of pipe and duct insulation not scheduled for removal shall be encapsulated using lag cloth.
J. All construction and demolition debris determined by the Environmental Consultant to be contaminated with asbestos shall be handled and disposed of as asbestos waste.
K. The use of metal shovels, metal dust pans, etc. are not permitted inside the work area.

EQUIPMENT AND WASTE CONTAINER DECONTAMINATION AND REMOVAL PROCEDURES

A. External surfaces of contaminated containers and equipment shall be cleaned by wet cleaning and/or HEPA vacuuming in the Work Area before moving such items into the waste decontamination enclosure system airlock by persons assigned to this duty. The persons in the Work Area shall not enter the airlock. No gross removal operations are permitted when waste transfer is in progress.
B. The containers and equipment shall be removed from the airlock by persons stationed in the washroom during waste removal operations. The external surfaces of containers and equipment shall be cleaned a second time by wet cleaning.
C. The cleaned containers of asbestos material and equipment are to be dried of any excessive pooled or beaded liquid, placed in uncontaminated 6 mil plastic bags or sheeting, as the item's physical characteristics demand, and sealed airtight.
D.The clean recontainerized items shall be moved into the airlock that leads to the holding area. Workers in the washroom shall not enter this airlock.
E. Containers and equipment shall be moved from the airlock and into the holding area by persons dressed in clean personal protective equipment, who have entered from the holding area.
F. The cleaned containers of asbestos material and equipment shall be placed in water tight carts with doors or tops that shall be closed and secured. These carts shall be held in the holding until transfer to the waste container. The carts shall be wet cleaned and/or HEPA vacuumed at least once each day.
G. The exit from the decontamination enclosure system shall be secured to prevent unauthorized entry.

H. Where the waste removal enclosure is part of the personnel decontamination enclosure, waste removal shall not occur during shift changes or when otherwise occupied. Precautions shall be taken to prevent short circuiting and cycling of air outward through the shower and clean room.

TENT ENCLOSURES

A. Tent enclosures may only be used where specifically permitted by Code Rule 56 or a Site Specific Variance issued by the NYS Department of Labor.
B. The Contractor shall restrict access to the immediate area where tent removal procedures are taking place using barrier tape and/or construction barriers. Caution signs shall be posted.
C. Remote personnel decontamination enclosures shall be constructed. Configuration shall be as required by Project size and a washroom with attached airlock shall be constructed contiguous to the tent enclosure for small and large size tent enclosure work areas. For tent enclosures with gross abatement of friable materials, a contiguous decontamination system shall be constructed, maintained and utilized, except for minor size tent enclosure work areas where an adjacent decontamination room or area is permitted by Code Rule 56.
D. The Work Area shall be precleaned. All objects and equipment that will remain in the restricted area during abatement shall be sealed with two layers of six mil polyethylene and tape.
E. The tent shall be a single use barrier constructed with a rigid frame and at least two layers of six mil polyethylene unless one layer of six mil polyethylene is otherwise permitted by Code Rule 56. Tents with twenty (20) square feet or less of floor space or no gross removal of friable ACM shall be constructed of one (1) layer of six mil polyethylene and shall include walls, ceilings and a floor (except portions of walls, floors and ceilings that are the removal surface) with double folded seams. All seams shall be sealed airtight using duct tape and/or spray adhesive.
F. The tent shall be constructed with at least one airlock for worker/waste egress.
G. A manometer shall be used for all OSHA Class I abatement.
H. Negative air shall be maintained at four (4) air changes per hour for non-friable and glovebag abatement tent enclosure work areas. Eight (8) air changes shall be maintained for friable gross removal tent enclosure work areas. In a Minor size abatement tent enclosure work area a HEPA vacuum may be used to maintain the required air changes.
I. OSHA compliance air monitoring is required per section 1.09.
J. ACM removal shall follow procedures defined in section 3.07.
K. Waste material shall be placed in properly labeled 6 mil plastic bags or other appropriate containers. The outside of the bags or containers shall be wet wiped and/or HEPA vacuumed in the washroom and shall then be placed in a second bag/container before being transferred to the waste storage container. All transportation of waste bags and containers outside the Work Area shall be in watertight carts. These carts shall be held in the holding area until transfer to the waste container. The carts shall be wet cleaned and/or HEPA vacuumed at least once each day.
L. Following completion of gross abatement and after all accumulations of asbestos waste materials have been containerized, the following decontamination procedures shall be followed.
  1. All bagged asbestos waste and unnecessary equipment shall be decontaminated and removed from the Work Area.
  2. All surfaces in the Work Area shall be wet cleaned. A wet_purpose shop vacuum may be used to pick up excess liquid, and shall be decontaminated prior to removal from the Work Area.
  3. The Contractor shall then apply a thin coat of encapsulant to all non-removal surfaces covered with plastic in the Work Area. In no event shall encapsulant be applied to any surface that was the subject of removal prior to obtaining satisfactory air monitoring results. Encapsulants shall be pigmented or tinted to provide an indication for completeness of coverage. The APM shall determine adequacy of coverage.
  3. After the waiting/settling/drying time requirements have elapsed, the Asbestos Project Monitor shall conduct a visual inspection of the Work Area for cleanliness and completion of abatement. The APM shall document the results of the visual inspection in the Project Monitor Log and Contractor's Daily Project Log.
  4. After satisfactory APM visual inspection, aggressive final clearance air sampling shall then be conducted by the Environmental Consultant.
  5. Upon receipt of satisfactory final clearance air sampling results, the tent shall be collapsed into itself, placed in suitable disposal bags, and tranferred through the washroom to the waste decontamination enclosure. Isolation and critical barriers shall then be removed and bagged as asbestos waste followed by satisfactory visual inspections by the project supervisor and the APM for cleanliness.

GLOVEBAG REMOVAL

A. Glovebag removals may only be used as specifically permitted by Code Rule 56 or a Site Specific Variance issued by the NYS Department of Labor. Glovebags may only be used on pipe or duct insulation.
B. In addition to conformance with applicable regulations and variances, glovebag removals are only permitted to be conducted within tent enclosures complying with these specifications.
C. The Contractor shall restrict access to the immediate area where tent/glovebag removal procedures are taking place using barrier tape and/or construction barriers. Caution signs shall be posted.
D. Remote personnel decontamination enclosures shall be constructed. Configuration shall be as required by Project size and a washroom with attached airlock shall be constructed contiguous to the tent enclosure.
E. Glovebag removals shall utilize commercially available glovebags of at least six mil thickness. Use shall be in accordance with the manufacturer's instructions and the following minimum requirements:
  1. The sides of the glovebag shall be cut to fit the size pipe being removed. Tools shall be inserted into the attached tool pocket.
  2. The glovebag shall be placed around the pipe and the open edges shall be folded and sealed with staples and duct tape. The glovebag shall also be sealed at the pipe to form a tight seal.
  3. Openings shall be made in the glovebag for the wetting tube and HEPA vacuum hose. The opening shall be sealed to form a tight seal.
  4. All glovebags shall be smoke tested by the Asbestos Project Monitor under negative pressure using the HEPA vacuum before removal operations commence. Glovebags that do not pass the smoke test shall be resealed and then retested.
  5. After first wetting the materials to be removed, removal may commence. ACM shall be continuously wetted. After removal of the ACM, the piping shall be scrubbed or brushed so that no visible ACM remains. Open ends of pipe insulation shall be encapsulated.
  6. After the piping is cleaned, the inside of the glovebag shall be washed down and the wetting tube removed. Using the HEPA vacuum, the glovebag shall be collapsed and then twisted and sealed with tape with the ACM at the bottom of the bag.
  7. A disposal bag shall be placed around the glovebag that is then detached from the pipe. The disposal bag is then sealed and transferred through the washroom to the waste storage container.
F. After glovebag removals are complete, tent decontamination procedures shall be followed.

NON-FRIABLE FLOORING AND/OR MASTIC REMOVALS

A. The following procedures may only be used for the removal of non-friable flooring and/or mastic materials using manual and chemical methods. These procedures shall not apply to beadblaster use or other abrasive abatement methods.
B. The Contractor shall restrict access to the immediate Work Area where non-friable ACM removal procedures are taking place using barrier tape and/or construction barriers. Caution signs shall be posted.
C. Remote personnel decontamination enclosures may be utilized and shall be constructed at a location in accordance with the approved Work Plan. A washroom with attached airlock shall be constructed contiguous to each Work area enclosure.
D. The Work Area shall be prepared per section 3.05, except that ceilings, walls, and floors need not be fully plasticized However, a four-foot high single layer of 6-mil fire retardant plastic sheeting shall be installed as a splashguard at all walls adjoining mastic removal portions of the work area, to prevent damage to the existing walls.
E. Negative air shall be maintained at six (6) air changes per hour.
F. OSHA compliance air monitoring is required per section 1.09.
G. ACM removal shall follow procedures defined in section 3.07.
H. Waste material shall be placed in properly labeled 6 mil plastic bags or other appropriate containers. The outside of the bags or containers shall be wet wiped and/or HEPA vacuumed in the washroom and double-bagged before being passed into the airlock. The bags or containers shall then be transported to the waste storage container. All transportation of waste bags and containers outside the Work Area shall be in watertight carts.
I. Following completion of gross abatement and after all accumulations of asbestos waste materials have been containerized, the following decontamination procedures shall be followed.
  1. All bagged asbestos waste and unnecessary equipment shall be decontaminated and removed from the Work Area.
  2. All plastic sheeting splashguards shall be removed and containerized, followed by all surfaces in the Work Area being wet cleaned. A wet_purpose shop vacuum may be used to pick up excess liquid, and shall be decontaminated prior to removal from the Work Area.
  3. The Contractor shall then apply a thin coat of encapsulant to all non-removal surfaces in the Work Area. In no event shall encapsulant be applied to any surface that was the subject of removal prior to obtaining satisfactory air monitoring results. Encapsulants shall be pigmented or tinted to provide an indication for completeness of coverage. The APM shall determine adequacy of coverage.
  4. After the waiting/settliong/drying time requirements have elapsed, the Asbestos Project Monitor (APM) shall conduct a visual inspection of the Work Area for cleanliness and completion of abatement. The APM shall document the results of the visual inspection in the Project Monitor Log and Contractor's Daily Project Log.
  5. After satisfactory APM visual inspection, aggressive final clearance air sampling shall then be conducted by the Environmental Consultant.
  6. Upon receipt of satisfactory final clearance air sampling results, the isolation and critical barriers shall be removed and bagged as asbestos waste. Following this and satisfactory inspections by the project supervisor and the APM for cleanliness the decontamination enclosures shall be removed.

RESTORATION OF UTILITIES, FIRESTOPPING, AND FINISHES

A. After final clearance, remove locks and restore electrical and HVAC systems. All temporary power shall be disconnected, power lockouts removed and power restored. All temporary plumbing shall be removed.
B. Finishes damaged by asbestos abatement activities including, but not limited to, plaster/paint damage due to duct tape, staples, and spray adhesives, and floor tile lifted due to wet or humid conditions, shall be restored prior to final payment.
  1. Finishes unable to be restored shall be replaced under this Contract at the Contractor's expense.
  2. All foam and expandable foam products and materials used to seal Work Area openings shall be completely removed upon completion of abatement activities.
C. All penetrations (including, but not limited to, pipes, ducts, etc.) through fire rated construction shall be firestopped using materials and systems tested in accordance with ASTM E814 on Projects where reinsulation is part of the required work.

DISPOSAL OF ASBESTOS WASTE

TRANSPORTATION AND DISPOSAL SITE

A. The Contractor's Hauler and Disposal Site shall be approved by the Owner. All waste generated during the asbestos project shall be disposed of as RACM asbestos waste.
B. The Contractor shall give twenty-four (24) hour notification prior to removing any waste from the site. Waste shall be removed from the site only during normal working hours unless otherwise specified. No waste may be taken from the site unless the Contractor and Environmental Consultant are present and the Environmental Consultant authorizes the release of the waste as described herein.
C. All waste generated as part of the asbestos project shall be removed from the site within ten (10) calendar days after successful completion of all asbestos abatement work.
D. Upon arrival at the Project Site, the Hauler must possess and present to the Environmental Consultant a valid New York State Department of Environmental Conservation Part 364 Asbestos Hauler's Permit. The Environmental Consultant may verify the authenticity of the hauler's permit with the proper authority.
E. The Hauler, with the Contractor and the Environmental Consultant, shall inspect all material in the transport container prior to taking possession and signing the Asbestos Waste Manifests.

WASTE STORAGE CONTAINERS

A. All waste containers shall be fully enclosed and lockable (i.e. enclosed dumpster, trailer, etc.). No open containers will be permitted on-site (i.e. open dumpster with canvas cover, etc.) unless specifically permitted by applicable regulation or a Site Specific Variance. When asbestos contaminated waste must be kept on the work site overnight or longer, it shall be double bagged and stored in accordance with Federal, State, and local laws.
B. The Environmental Consultant shall verify that the waste storage container and/or truck tags (license plates) match that listed on the New York State Department of Environmental Conservation Part 364 permit. Any container not listed on the permit shall be removed from the site immediately.
C. The container shall be plasticized and sealed with two (2) layers of 6 mil polyethylene. Once on site, it shall be kept locked at all times, except during load out. The waste container shall not be used for storage of equipment or contractor supplies.
D. While on-site, the container shall be labeled with EPA Danger signage:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

E. The New York State Department of Environmental Conservation Asbestos Hauler's Permit number shall be stenciled on both sides and back of the container.
F. The container is not permitted to be loaded unless it is properly plasticized, has the appropriate danger signage affixed, and has the permit number appropriately stenciled on the container.

G. Waste generated off-site is not permitted to be brought onto the Project site and loaded into the waste container.
H. All asbestos waste removed from the project site shall be transported directly to the disposal site without any addtional waste being added to the container during transport.

PROJECT TITLE

SAUNDERS TRADES AND TECHNICAL HIGH SCHOOL HVAC UPGRADES

PROJECT ADDRESS

183 PALMER RD
YONKERS, NY 10701

OWNER

YONKERS PUBLIC SCHOOLS

ARCHITECT

FULLER AND D'ANGELO P.C.
45 KNOLLWOOD ROAD
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(T) 914.592.4444

MEP ENGINEER AND ENVIRONMENTAL ENGINEER

LiRo Engineers, Inc.
A LiRo Group Company
Syosset, N.Y. 516-214-8157[T]

KEY PLAN: NOT TO SCALE

SHEET SIZE 30X42

MARK	DATE	DESCRIPTION
REVISION		
	08.17.20	90% CD
△1	02.04.21	ADDENDUM 4
MARK	DATE	DESCRIPTION
ISSUE		

SED #: 66-23-00-01-0-206-017
YPS JOB: 10881
DESIGN BY: R. SALERNO - 10-00697
DRAWN BY: S. RAMCHARAN
CHK'D BY: C. ZANONI - 92-16430
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PETER JOSEPH GERBASI
No. 070446

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SHEET TITLE

ASBESTOS ABATEMENT NOTES

H-100B

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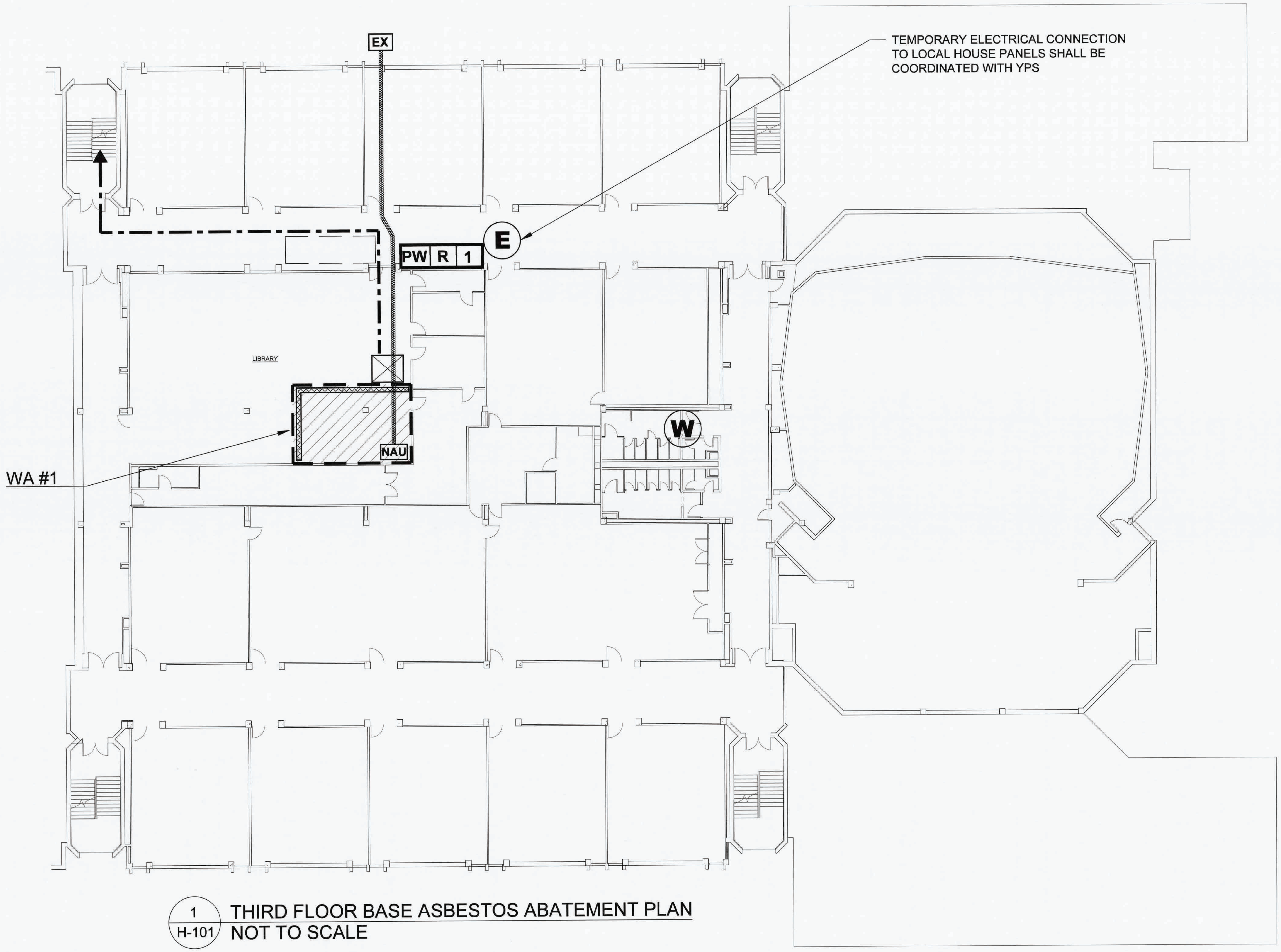

TEMPORARY ELECTRICAL CONNECTION TO LOCAL HOUSE PANELS SHALL BE COORDINATED WITH YPS

1 / H-101 THIRD FLOOR BASE ASBESTOS ABATEMENT PLAN
NOT TO SCALE

LEGEND

— — —	- WORK AREA LIMITS	E	- TEMPORARY ELECTRIC
▨	- FLOOR TILES - 9"X9" BEIGE	— · — · →	- WASTE ROUTE
PW R #	- REMOTE SMALL PROJECT DECONTAMINATION UNIT	NAU ∞∞∞ EX	- NEGATIVE AIR UNIT
W	- TEMPORARY WATER	☒	- AIRLOCK
		∿∿∿	- ISOLATION BARRIER

Work Area	Location	Description of Asbestos Material	Approximate Quantity Of ACM	ICR 56 Procedure
1	3rd Floor Library (Corner)	9"x9" Beige Floor Tile and Mastic	200.0 SF	56-11.7
		Total	200.0 SF	

PROJECT TITLE

SAUNDERS TRADES AND TECHNICAL HIGH SCHOOL HVAC UPGRADES

PROJECT ADDRESS

183 PALMER RD
YONKERS, NY 10701

OWNER

YONKERS PUBLIC SCHOOLS

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MARK	DATE	DESCRIPTION

REVISION

MARK	DATE	DESCRIPTION
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△1	02.04.21	ADDENDUM 4

ISSUE

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CHK'D BY: C. ZANONI - 92-16430

ENGINEER'S SEAL

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SHEET TITLE

THIRD FLOOR BASE ASBESTOS ABATEMENT PLAN

H-101

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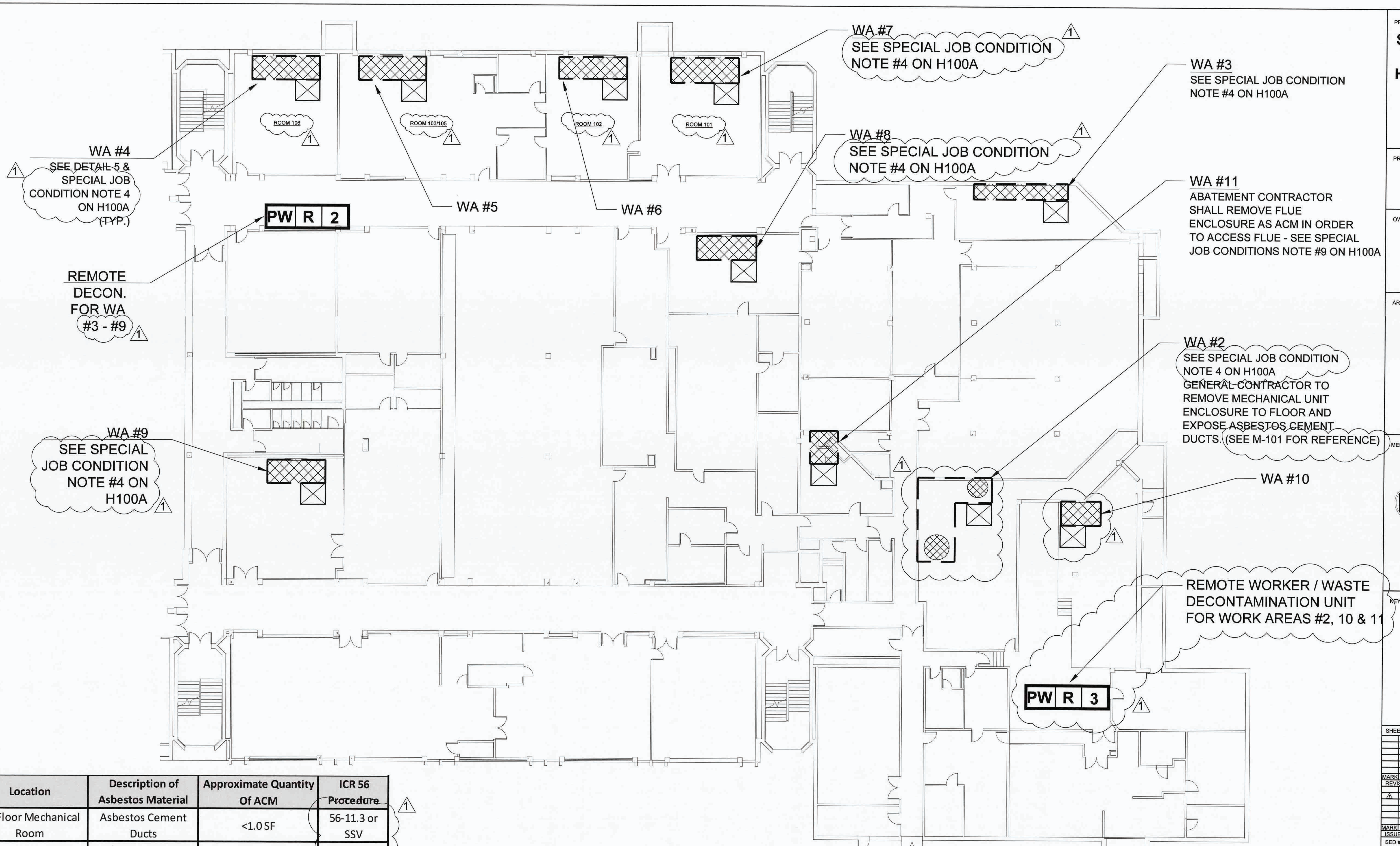

1 H-102 FIRST FLOOR BASE ASBESTOS ABATEMENT PLAN
NOT TO SCALE

Work Area	Location	Description of Asbestos Material	Approximate Quantity Of ACM	ICR 56 Procedure
2	1st Floor Mechanical Room	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
3	1st Floor Fan Room	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
4	1st Floor Room 101	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
5	1stFloor Room 102	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
6	1st Floor Room 103/105	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
7	1st Floor Room 106	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
8	1st Floor Faculty Dining	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
9	1st Floor Room 110	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
10	1st Mechanical Room - Incinerator Duct	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
11	1st Floor Old Incincerator Room	Flue / Flue Liner	50 LF	56-7.11 (f)
		Total	200.0 SF / 50.0 LF	

LEGEND

— — —	- WORK AREA LIMITS
▨	- ASBESTOS CEMENT DUCTS
☒	- AIRLOCK
PW R #	- REMOTE WORKER/WASTE DECONTAMINATION UNIT

PROJECT TITLE

SAUNDERS TRADES AND TECHNICAL HIGH SCHOOL HVAC UPGRADES

PROJECT ADDRESS

183 PALMER RD
YONKERS, NY 10701

OWNER

YONKERS PUBLIC SCHOOLS

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KEY PLAN: NOT TO SCALE

SHEET SIZE 30X42

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REVISION		
	04.17.20	90% CD
1	02.04.21	ADDENDUM 4

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SHEET TITLE

FIRST FLOOR BASE ASBESTOS ABATEMENT PLAN

H-102

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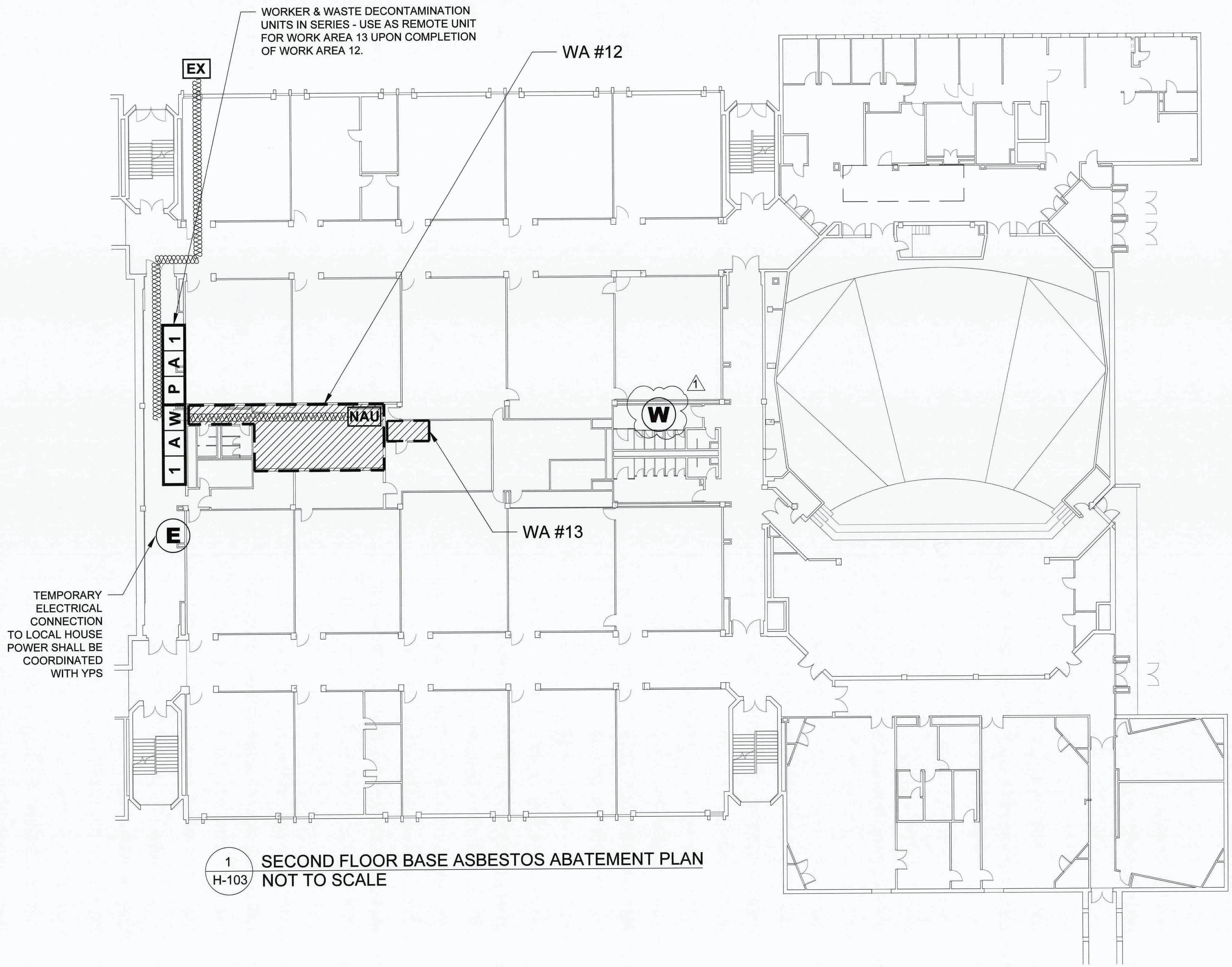

1 H-103 SECOND FLOOR BASE ASBESTOS ABATEMENT PLAN
NOT TO SCALE

Work Area	Location	Description of Asbestos Material	Approximate Quantity Of ACM	ICR 56 Procedure
12	2nd Floor Teacher Room	9"x9" Floor Tile and Mastic	550.0 SF	56-11.7
13	2nd Floor Storage Room	9"x9" Floor Tile and Mastic	65.0 SF	56-11.7
		Total	615.0 SF	

LEGEND

- – – – - WORK AREA LIMITS
- ▨ - FLOOR TILES - 9"X9" BEIGE
- PW A # - ATTACHED LARGE PROJECT DECONTAMINATION UNIT
- W - TEMPORARY WATER
- E - TEMPORARY ELECTRIC
- – · → - WASTE ROUTE
- NAU EX - NEGATIVE AIR UNIT

PROJECT TITLE

SAUNDERS TRADES AND TECHNICAL HIGH SCHOOL HVAC UPGRADES

PROJECT ADDRESS

183 PALMER RD
YONKERS, NY 10701

OWNER

YONKERS PUBLIC SCHOOLS

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KEY PLAN: NOT TO SCALE

SHEET SIZE 30X42

MARK	DATE	DESCRIPTION
REVISION		
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1	02.04.21	ADDENDUM 4

MARK	DATE	DESCRIPTION
ISSUE		

SED #: 66-23-00-01-0-206-017
YPS JOB: 10881
DESIGN BY: R. SALERNO - 10-00697
DRAWN BY: S. RAMCHARAN
CHK'D BY: C. ZANONI - 92-16430

ENGINEER'S SEAL

PETER JOSEPH GERBASI
No. 070446

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SHEET TITLE

SECOND FLOOR BASE ASBESTOS ABATEMENT PLAN

H-103

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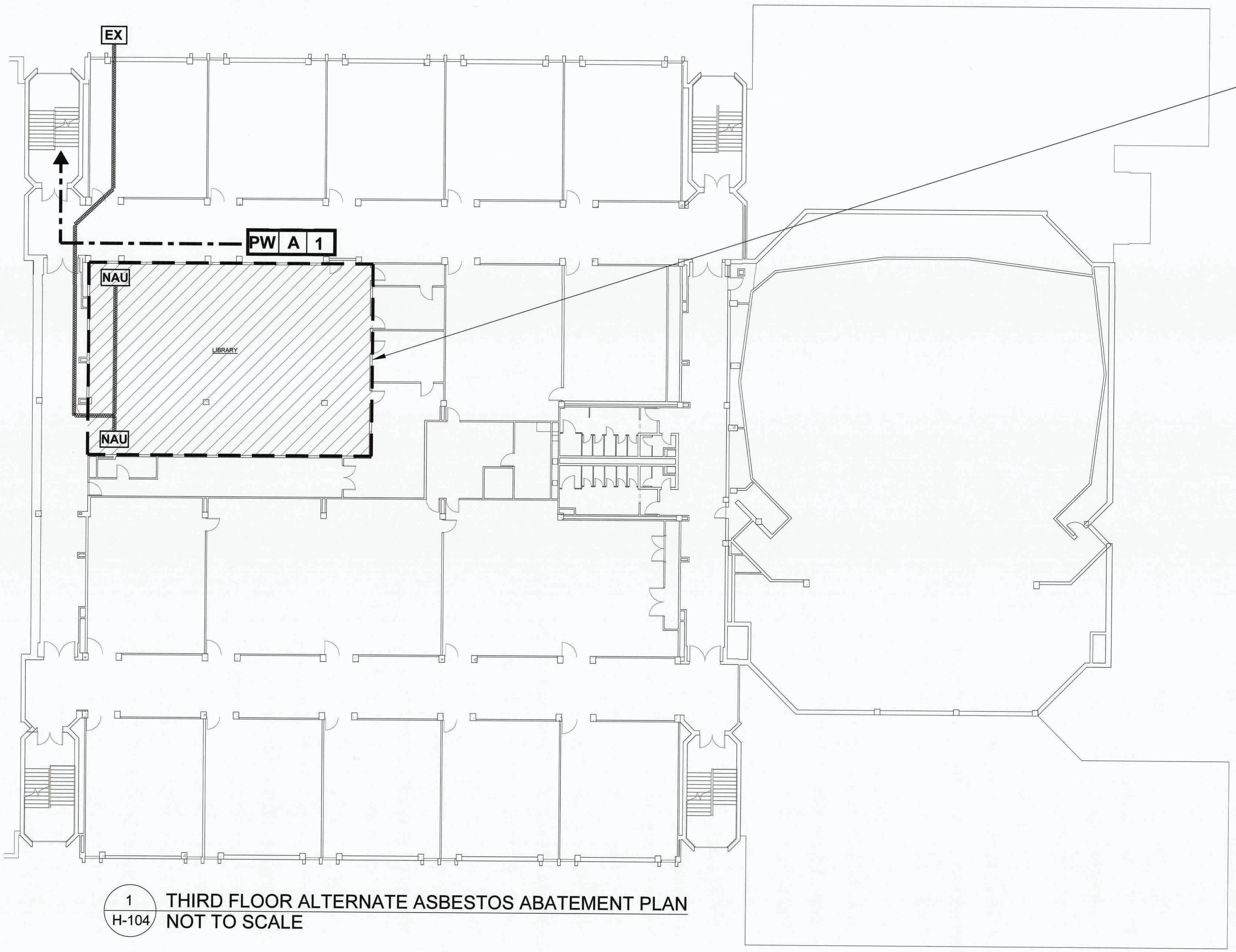

WA #A1 -

ASBESTOS FLOOR TILES ARE ASSUMED TO EXTEND BENEATH STACKS - CONTRACTOR IS RESPONSIBLE FOR MOVING STACKS TO FACILITATE ABATEMENT AND RETURNING STACKS TO THEIR ORIGINAL LOCATION FOLLOWING ABATEMENT AND REPLACEMENT OF TILES.

1
H-104

THIRD FLOOR ALTERNATE ASBESTOS ABATEMENT PLAN
NOT TO SCALE

Work Area	Location	Description of Asbestos Material	Approximate Quantity Of ACM	ICR 56 Procedure
A1	3rd Floor Library	9"x9" Beige Floor Tile and Mastic	2,450.0 SF	56-11.7
		Total	2,450.0 SF	

LEGEND

— — —	- WORK AREA LIMITS
▨	- FLOOR TILES - 9"X9" BEIGE
PW A #	- ATTACHED LARGE PROJECT DECONTAMINATION UNIT
Ⓦ	- WATER
Ⓔ	- ELECTRIC
— · — · →	- WASTE ROUTE
NAU EX	- NEGATIVE AIR UNIT

PROJECT TITLE

SAUNDERS TRADES AND TECHNICAL HIGH SCHOOL HVAC UPGRADES

PROJECT ADDRESS

183 PALMER RD
YONKERS, NY 10701

OWNER

YONKERS PUBLIC SCHOOLS

ARCHITECT

FULLER AND D'ANGELO P.C.
45 KNOLLWOOD ROAD
ELMSFORD, NY 10523
(T) 914.592.4444

MEP ENGINEER AND ENVIRONMENTAL ENGINEER

LiRo Engineers, Inc.
A LiRo Group Company
Syosset, N.Y. 516-214-8157[T]

KEY PLAN: NOT TO SCALE

SHEET SIZE 30X42

MARK	DATE	DESCRIPTION

REVISION

	04.17.20	90% CD
⚠1	02.04.21	ADDENDUM 4
MARK	DATE	DESCRIPTION

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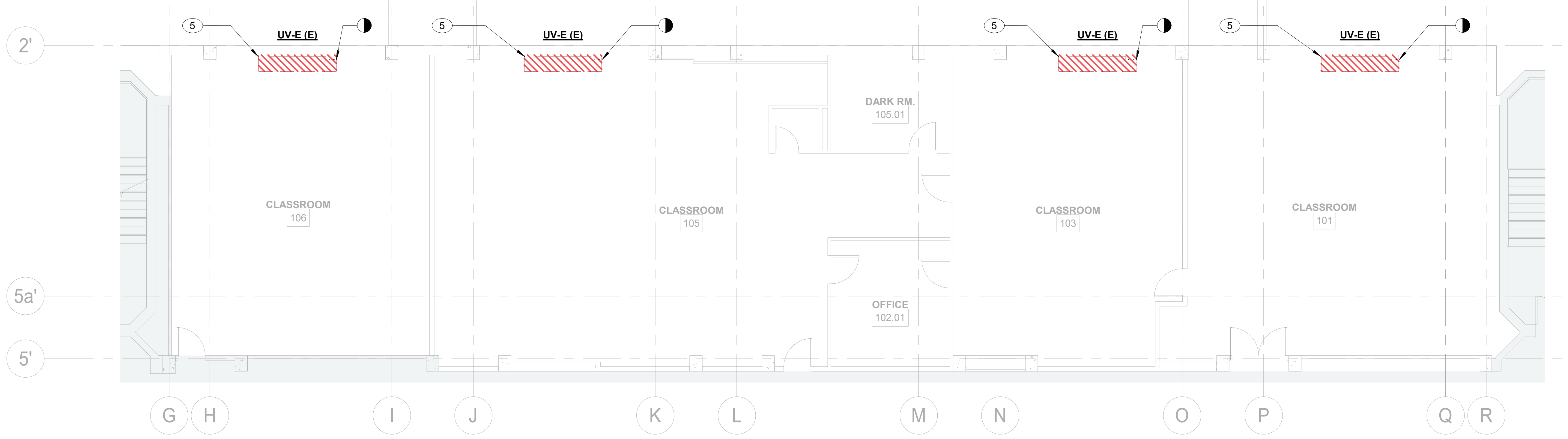
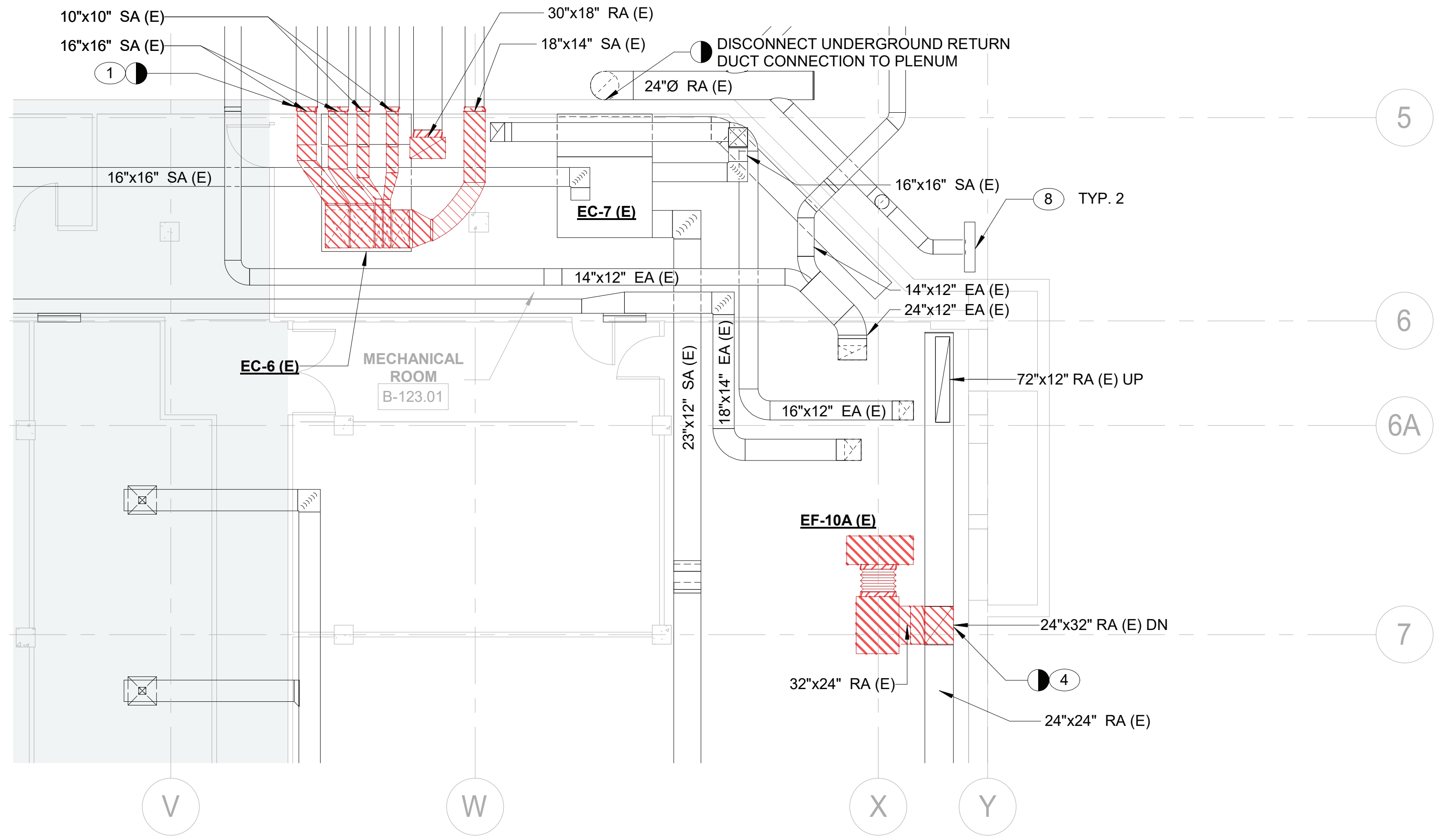


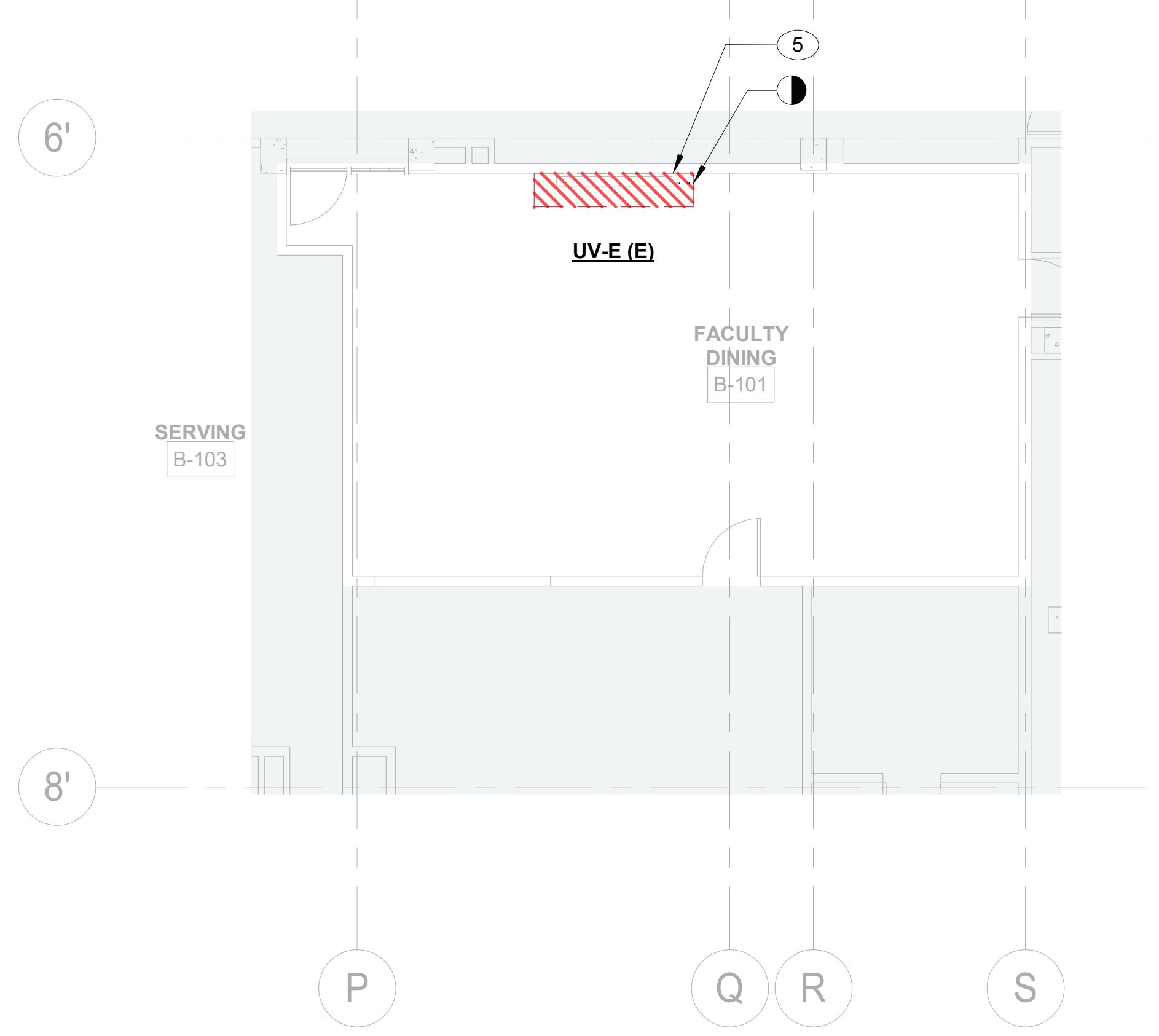
MECHANICAL 1ST FLOOR HVAC CLASSROOM DEMOLITION PLAN

N 8' 4' 0' 8'



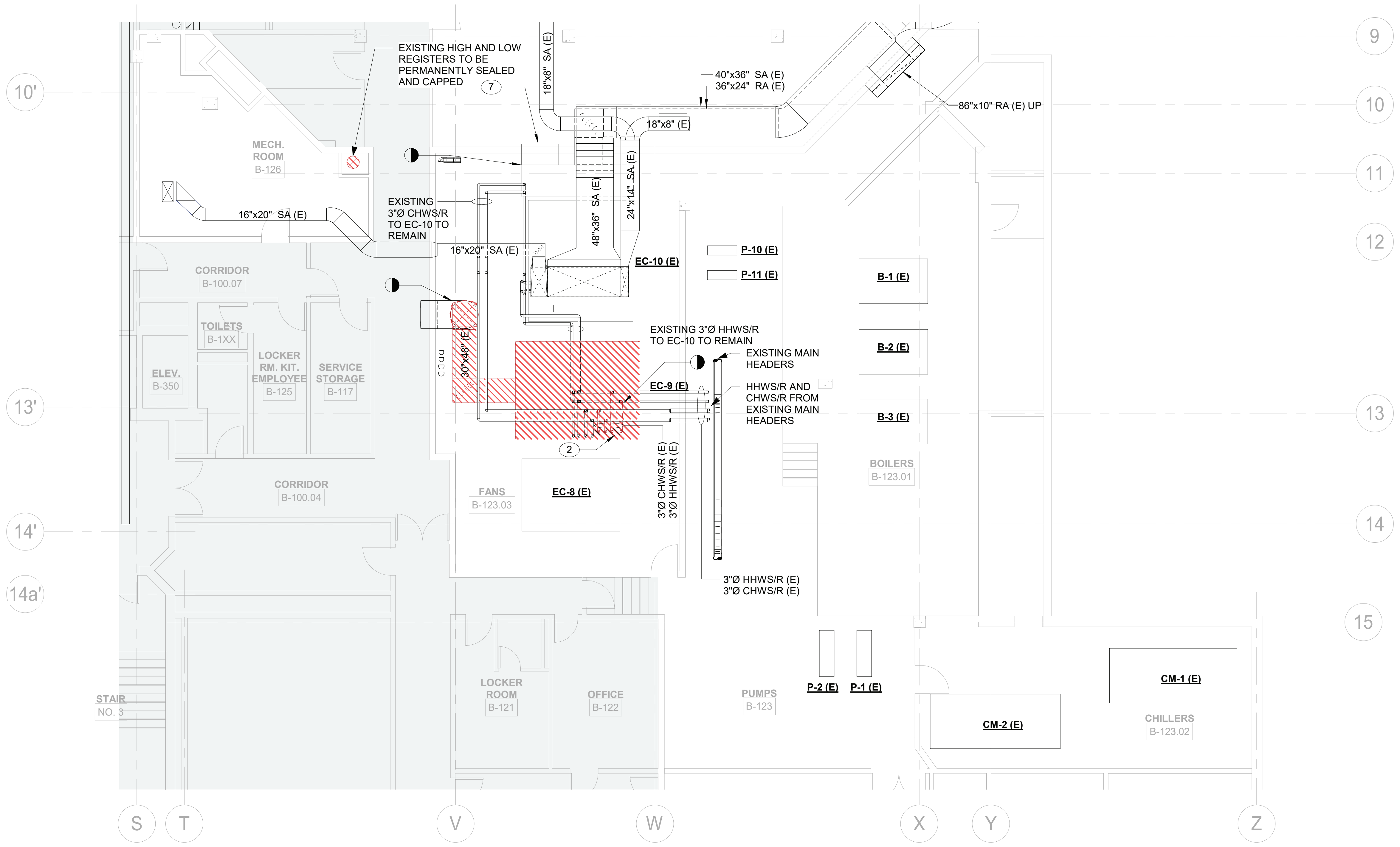
MECHANICAL 1ST FLOOR HVAC MER DEMOLITION PLAN

N 8' 4' 0' 8'



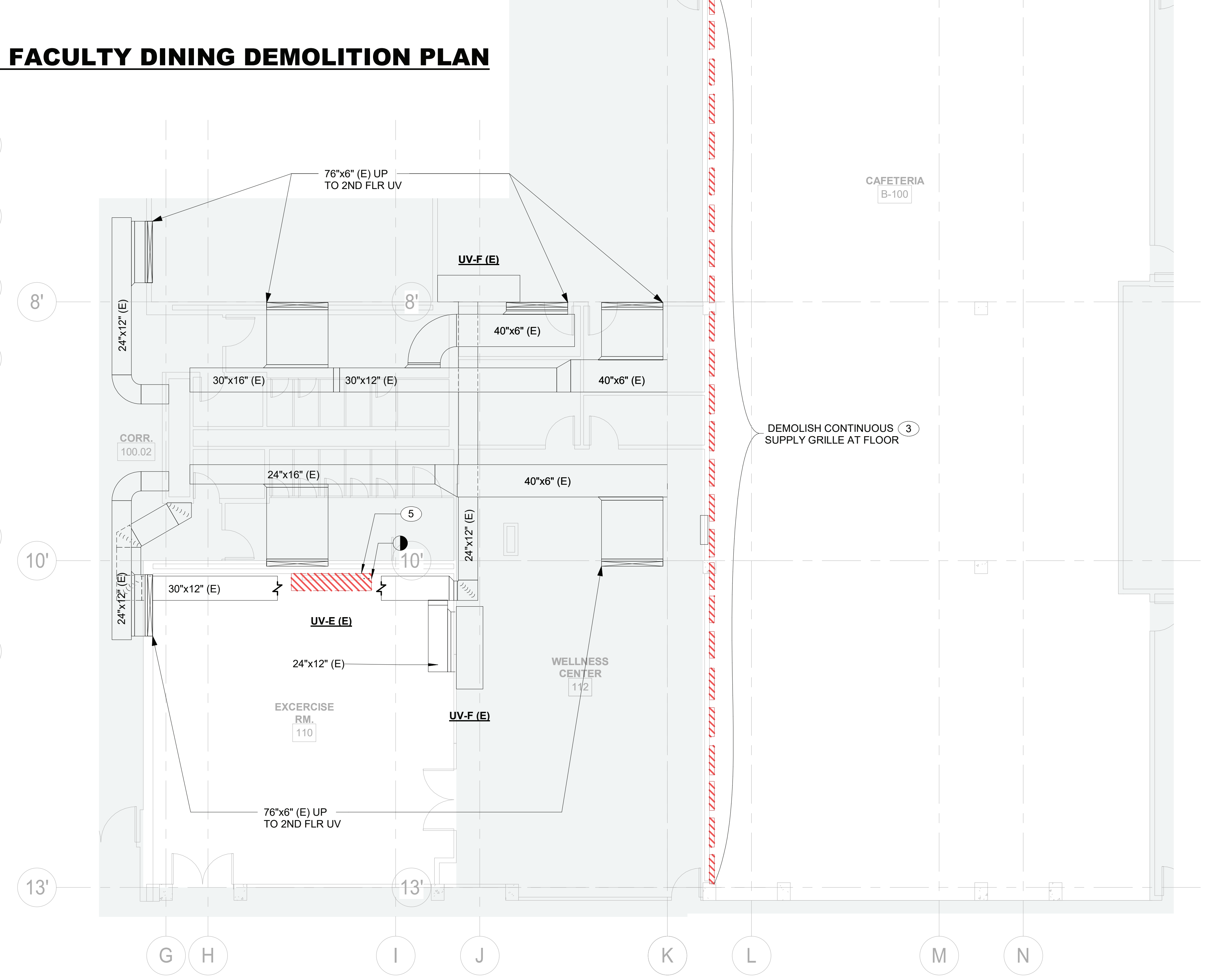
MECHANICAL 1ST FLOOR HVAC FACULTY DINING DEMOLITION PLAN

N 8' 4' 0' 8'



MECHANICAL 1ST FLOOR HVAC BOILER RM DEMOLITION PLAN

N 8' 4' 0' 8'



MECHANICAL 1ST FLOOR HVAC EXCERCISE ROOM & CAFETERIA DEMOLITION PLAN

N 8' 4' 0' 8'

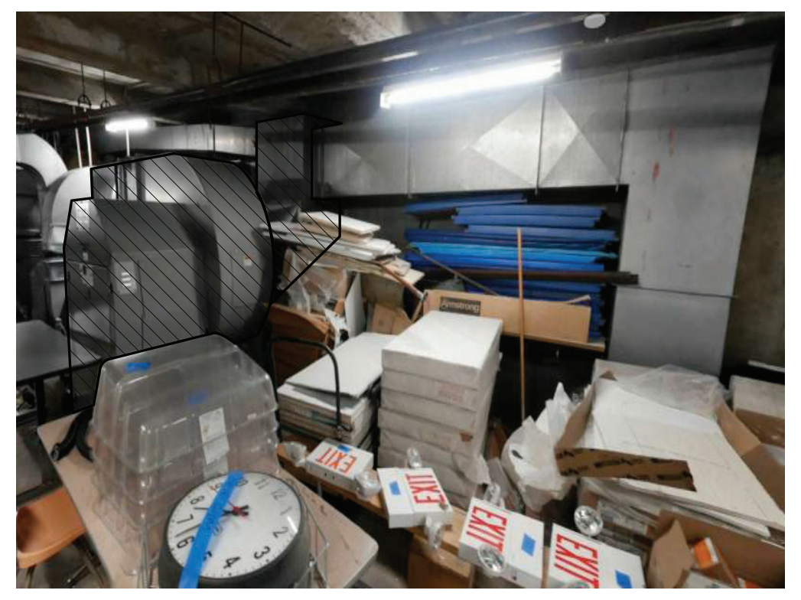


FIGURE 1:
MECHANICAL ROOM EXHAUST FAN
EF-10A

FIGURE 2:
CAFETERIA SUPPLY GRILLE

FIGURE 3:
MER ROOM DUCT CONNECTION TO
UNDERGROUND TRANSITE DUCTS

FIGURE 4:
MER ROOM DUCT TRANSITION FROM
EC-6

MECHANCIAL NOTES:

① DEMOLISH SUPPLY AND RETURN DUCTWORK FROM UNIT EC-6 UP TO 6 INCHES FROM WHERE TRANSITION TO TRANSITE DUCT OCCURS. REMAINDER TO BE REMOVED AND SEALED BY ABATEMENT CONTRACTOR. (SEE FIGURE 3 & 4)

② EC-9 TO BE DEMOLISHED. SUPPLY DUCTWORK TO BE DEMOLISHED UP TO 6 INCHES ABOVE FLOOR SLAB. THE REMAINDER OF SUPPLY DUCT TO BE REMOVED AND FLOOR SLAB PENETRATION SEALED BY ABATEMENT CONTRACTOR. MECHANICAL CONTRACTOR TO SEAL UP EC-9 CONNECTION TO OUTDOOR AIR PLENUM. DEMOLISH HEATING HOT WATER AND CHILLED WATER PIPES BACK TO HEADER.

③ CONTINUOUS SUPPLY GRILLES AND PLENUM (SEE FIGURE 2) ALONG CAFETERIA WALL TO BE REMOVED. SUPPLY AIR INTAKE OPENINGS TO BE FILLED AND COVERED BY ABATEMENT CONTRACTOR.

④ DISCONNECT 24x32 EXHAUST FAN CONNECTION FROM 24x24 RETURN MAIN AND PATCH DUCT TO MAINTAIN INTEGRITY OF RETURN DUCT MAIN. EF-10A AND ASSOCIATED 24x32 DUCT TO BE DEMOLISHED. (SEE FIGURE 1)

⑤ UNIT VENTILATORS TO BE REMOVED. ABATEMENT CONTRACTOR TO REMOVE UNIT UNDER ABATEMENT CONDITIONS. OUTSIDE AIR INTAKE TRENCH TO BE FILLED AND COVERED BY ABATEMENT CONTRACTOR. MECHANICAL CONTRACTOR TO DISCONNECT EXISTING PIPES AND CONTROLS WIRING.

⑥ CHILLED WATER PUMPS TO BE REPLACED. CUT BACK EXISTING PIPING TO ENABLE NEW PUMPS INSTALLATION, MAINTAIN EXISTING INSTRUMENTATION AS MUCH AS FEASIBLE. SEE PHOTO ON M-301.

⑦ MECHANICAL CONTRACTOR TO TEMPORARILY REMOVE THE EC-10 DISCHARGE PLENUM TO ALLOW ACCESS FOR ABATEMENT WORK. EXISTING 48x24 RETURN DUCT TO EC-10 TO BE DISCONNECTED AND SEALED BY ABATEMENT CONTRACTOR.

⑧ EXISTING GRILLES (ONE SIDEWALL GRILLE AT SECURITY CLOSET WALL AND ONE FLOOR-MOUNTED GRILLE IN LOBBY) TO BE DEMOLISHED BY MC. EXISTING TRANSITE DUCTS TO BE CUT BACK TO SLAB AND SEALED BY ABATEMENT CONTRACTOR. FLOOR TO BE RESTORED BY GC.

GENERAL NOTES:

1. SEE ENVIRONMENTAL DRAWINGS FOR GC AND REMEDIATION CONTRACTOR SCOPE TO CAP AND SEAL ABANDONED DUCTS.
2. UNDERGROUND DUCTS CONNECTED TO EC-6,7,9, AND 10 TO BE ABANDONED IN PLACE.

1

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1	02.03.21	ADDENDUM 4
0	09.28.20	ISSUED FOR BID
	04.17.20	100% CONSTRUCTION DOCUMENTS
	03.27.20	90% CONSTRUCTION DOCUMENTS

ISSUE

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ENGINEER'S SEAL

SHEET TITLE

MECHANICAL 1ST FLOOR HVAC DEMOLITION PLAN

M-101

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