1.01 SCOPE OF WORK

A. Work procedures to be conducted at Hunziker Wing located at William Paterson University are listed below. **TIME IS OF THE ESSENCE**. The following asbestos-containing material is known to be present in the work facilities.

Item	Asbestos Content	Other Component
Pipe Insulation	**10% Chrysotile**	**Binders**
9" Tan and Beige Speckled Floor Tile/Mastic	**8% Chrysotile**	**Binders**
Transite Panels	**10% Chrysotile**	**Binders**
9" Tan Floor Tile/Mastic	**7% Chrysotile**	**Binder**
Cream Floor Tile	**2% Chrysotile**	**Binders**
Tank Insulation	**3% Chrysotile**	**Binders**
Pipe Fitting Insulation	**3% Chrysotile**	**Binders**
Dumb Waiter Door Insulation	**10% Chrysotile**	**Binders**
Interior Fire Door Insulation	**10% Chrysotile**	**Binders**

The Contractor Shall:

a. Prior to commencement of any work, make a complete inspection of the work areas and issue in writing a complete report of the existence of any damages to the "the University" upon the date of the contract origin. The Contractor shall be responsible for all damages not identified in his/her initial report.

b. Prior to any work, disable the ventilating systems or any other system bringing air into or out of the work area by lockable switch, or other positive means that shall prevent accidental premature restarting of equipment.

c. As part of the abatement work, remove and dispose of asbestos-containing materials from the following areas:

Material	Location
Pipe Insulation Pipe Fitting Insulation	Hunziker Wing-First Floor, Second Floor, Third Floor. Building Knuckle- First Floor, Second Floor Hunziker Hall-Basement Mechanical Room and Hallway
9" Tan and Beige Speckled Floor Tile/Mastic	Hunziker Wing-Rm 104, Rm 107, Rm 124
Transite Panels	Hunziker Wing-First Floor Hallway, Second Floor Hallway and Third Floor Hallway (Above Lockers) Building Knuckle-Exterior outside Child Development Room
9" Tan Floor Tile/Mastic All flooring materials down to bottom layer of non-asbestos flooring.	Hunziker Wing-Rm 107, Conference Room 120, Rm 126, Rm 102, 7A-E Faculty Offices, Elevator, Rm 9, Rm 6C/6D
Cream Floor Tile/Mastic All flooring materials down to bottom layer of non-asbestos flooring.	Hunziker Wing-Elevator
Tank Insulation	Hunziker Wing-First Floor Mechanical Room
Transite Pipe	Hunziker Wing-Third Floor Hallway
Dumb Waiter Door Insulation	Hunziker Hall-Basement Mechanical Room
Interior Fire Door Insulation	Hunziker Wing-Throughout

1.02 CONTRACTORS' RESPONSIBILTIES

A. All workers shall hold a valid permit issued by the New Jersey Department of Labor and Workforce Development (DLWD). All workers shall hold a valid permit issued by the New Jersey Department of Labor. The Contractor is advised that work under this contract shall be performed in accordance with the requirements of the Uniform Construction Code of the State of New Jersey, Subchapter 8, Asbestos Hazard Abatement Sub Code, N.J.A.C. 5:23-8 and the requirements of the Asbestos Hazard Emergency Response Ace (AHERA) and any additional requirements that may be imposed by the New Jersey Department of Community Affairs (DCA), New Jersey Department of Health and Senior Services (DHSS), New Jersey Department of Labor and Workforce Development (DLWD), New Jersey Department of Education, United States Department of Labor, and the United States Environmental Protection Agency (EPA.).

B. Prior to the abatement commencement, the contractor shall perform selective demolishing in order to locate and access any asbestos-containing pipe insulation which is hidden behind walls or within ceilings. There is approximately 3,575 lf of pipe insulation which is accessible. The contractor shall include in his price a unit price per linear foot for the removal of any asbestos-containing pipe insulation located during the selective demolishing.

C. The abatement contractor shall remove all flooring from rooms as noted in the table above, including floor tiles, mastics, linoleum and any sub-flooring down to bottom layer of non-asbestos flooring. The contractor is responsible for removing all items (i.e. carpeting, shelves, etc) to access flooring material. All floor tile in the server room and under unit ventilators shall remain in place.

D. Contractor is responsible for removing pipe insulation, pipe fitting insulation and dumb waiter door insulation in Hunziker Hall Basement Mechanical Room via NJAC 5:23-8.17/8.19. Contractor is responsible for removing pipe insulation and pipe fitting insulation throughout the first and second floor of the Building Knuckle and throughout Hunziker Wing. The removal of asbestos-containing pipe insulation and pipe fitting insulation shall be performed via NJAC 5:23-8.17/8.19. Removal of the tank insulation shall be removed via NJAC 5:23-8.19.

E. All transite paneling and flooring materials shall be abated under negative pressure containment via non-friable methods.

F. All interior fire doors should be removed via non-friable methods and disposed of properly following all local, state and federal regulations.

G. The server room is to remain active during all demolition and renovation activities. This room contains sensitive electronic components that need to be protected from dust and debris at all times. Strict protection guidelines must be followed during renovations.

H. The contractor shall remove and replace all drywall in Room 002 within the Hunziker Hall Basement that has been impacted by mold. The impacted drywall should be remediated in accordance with the Institute of Inspection, Cleaning & Restoration Certification (IICRC) S500.

I. The contractor shall request that the Facility Manager deactivate the HVAC system, any fire or heat detection system and electrical system in the work area and the confirmation of the same before the start of work.

J. Completely isolate the work area from other parts of the building to prevent asbestos-containing dust or debris from passing beyond the isolated area. Should the area beyond the work area(s) become contaminated with asbestos-containing dust or debris as a consequence of the work, clean those areas in accordance with all regulations. Perform all such required cleaning or decontamination at no additional cost to the owner.

K. William Paterson University shall provide all necessary electric and all necessary water needed to complete the asbestos abatement project. The asbestos abatement contractor shall be responsible to hire a licensed electrician to connect the required GFCI panel box to existing electric panel box. The asbestos abatement contractor shall also be responsible to hire a licensed plumber for any necessary plumbing connections to access the existing water supply.

L. Clean, dismantle, remove, and replace all items and equipment which should be moved prior to asbestos cleanup.

M. The contractor is responsible for providing fire watch and manometer watch during the Subchapter 8 abatement portion of this project.

N. The contractor is responsible for removing and safely storing all lay-in ceiling tile. All lay-in ceiling tiles and ceiling tile grids must be removed without compromising the light fixtures.

1.03 CODE REQUIREMENTS

A. All asbestos removal and decontamination shall be performed in accordance with the guidelines and regulations of the responsible federal and state agencies: United States Environmental Protection Agency (E.P.A.), Occupational Safety and Health Administration (OSHA), New Jersey Department of Health and Senior Services (DHSS), New Jersey Department of Labor and Workforce Development (DLWD), and the New Jersey Department of Environmental Protection (DEP).

B. Assume full responsibility and liability for the compliance with all applicable Federal, State, and Local regulations pertaining to work practices, hauling, and disposal. The Contractor is responsible for providing medical examinations and maintaining medical records of personnel as required by the applicable Federal, State, and Local regulations. The Contractor shall hold the Owner and the Owner's Representative harmless for failure to comply with any applicable work, hauling, disposal, safety, health or other regulation on the part of himself/herself, his/her employees, or his/her subcontractors.

C. Except to the extent that more explicit or more stringent requirements are written directly into the contract documents, all applicable codes, regulations, and standards have the same force and effect (as if copied directly into the contract documents, or as if published copies are bound herewith.

D. Strictly adhere to all precautions necessary for the safety and health of the work person in accordance with provisions of OSHA Standards, 26 Code of Federal Registers C.F.R., Part 1926.1101 Constructions Standards, and Section 1910.1001, Industry Standards.

E. Properly contain, transport, and dispose of all contaminated wastes and materials at a site approved for asbestos disposal. The dumpster may be stored on-site as per the Building Owner/Owner's Representative. The dumpster shall be completely enclosed and locked.

1.04 PRE-ABATEMENT DOCUMENTATATION

A. Required pre-abatement documentation shall include all of the following:

1. Furnish documentation that the firm and its employees are familiar with the following regulations of the United States Department of Labor (D.O.L.), Occupational Safety and Health Administration (OSHA) and the United States Environmental Protection Agency (E.P.A.) relating to the application, removal, disposal and treatment of asbestos:

2. United States Environmental Protection Agency Regulations for Asbestos (C.F.R., Title 40, Part 61, Subparts A and M. National Emissions Standards for Hazardous Air Pollutants (N.E.S.H.A.P.S.).

3. United States Department of Labor (D.O.L.), Occupational Safety and Health Administration (OSHA) Asbestos Regulations (C.F.R., Title 29, Part Section 1910 and 1926).

4. American National Standard Practices for Respiratory Protection (A.N.S.I.) Z88.2-1980.

5. The contractor must provide DPMC qualifications.

6. Any other applicable Federal, State, County or Local rules or regulations.

B. Furnish proof that all workers on the job (supervisors and asbestos workers) have been given medical examinations within the past year as required by OSHA regulations, 29 C.F.R. 1926.1101. As a minimum, the examination should include a chest X-ray interpreted by a B-reader, a medical history with specific reference to respiratory disease and pulmonary function tests.

1.05 NOTIFICATIONS

A. The Contractor shall notify the following agencies in writing 10 days prior to the start of an asbestos removal project. The written notice shall include the following: a copy of the completed application for a construction permit for asbestos abatement, a copy of the permit if the administrative authority is a municipal enforcing agency and not the department.

1.	United States Environmental Protection Agency Air and Hazardous Materials Division 26 Federal Plaza New York, New York 10007 (212) 264-7307	Ten (10) Days Notification
2.	New Jersey Department of Community Affairs Bureau of Construction and Code Enforcement 101 South Broad Street Trenton, NJ 08625 (609) 530-8812	Ten (10) Days Notification
3.	New Jersey Department of Labor and Workforce Development (DLWD) 1 John Fitch Plaza, PO Box 110 Trenton, NJ 08625	Ten (10) Days Notification
4.	NJ Department of Health & Senior Services Asbestos & Lead Unit 3635 Quakerbridge Road PO Box 369 Trenton, NJ 08625	Ten (10) Days Notification

B. This notification shall include the following information:

1. Name and address of Contractor.

2. Address and description of the building, including size, age, and prior use of the building or area, the amount of friable asbestos material present (square feet). Designated room numbers or other location information unless entire building is involved.

3. Scheduled starting and completion dates for removal.

4. Procedures and equipment (including ventilation systems) that shall be employed to comply with the C.F.R., Title 40, Part 61 of the United States Environmental Protection Agency.

C. The Contractor shall notify the following agency in writing prior to the **removal** of asbestos from the job site and the **disposal** of asbestos waste. All asbestos waste materials destined for disposal shall be in accordance with 40 C.F.R. 61.20 -25 before it can be legally transported and disposed of.

New Jersey Department of Environmental Protection Division of Hazardous Waste Management Twin River Professional Building East Windsor, New Jersey 08520	Ten (10) Days Notification

D. **The notification shall include the following:**

a. Name, address, and telephone number of the removal project.

b. Quantity in cubic yards and nature of the waste to be disposed (I.D. #27 for Asbestos).

c. Name, address, and New Jersey Department of Environmental Protection registration number of the collector-handler.

d. Name and address of the landfill at which disposal shall occur.

e. Date and time of disposal.

f. A copy of any written notification required by 40 C.F.R. 61.22 to 61.25.

1.06 DOCUMENTATION REQUIRED AT WORK SITE

A. A sign in black letters greater than four inches (4") in height stating the following:

"LICENSED BY THE STATE OF NEW JERSEY FOR ASBESTOS WORK"

The sign shall be readily visible to the outdoors at the work site.

B. An official copy of the Contractor's license obtained from the New Jersey Department of Labor and Workforce Development (DLWD

C. List of emergency telephone numbers to include: the monitoring firm employed by the Building Owner, E.P.A., O.S.H.A., D.H.S.S., D.C.A., D.L.D.W, fire, police, Campus police, local hospital, and emergency squad.

D. The Contractor shall establish work area emergency procedures and shall have such a plan posted in view. In case of an emergency, decontamination procedures shall not impede emergency procedures.

E. List of personnel including all new employees.

F. A daily log of all persons entering the work area, including all visitors. Non-employees of the Asbestos Contractor shall be required to sign an acceptable waiver form. The waiver form shall be approved by TTI's Project Manager.

G. The daily log shall include a record of start and stop times, any work area problems encountered, any corrective action, and estimated amount of asbestos waste generated.

H. The Contractor shall be responsible for obtaining a copy of the daily monitoring logs from their air testing firms and maintaining this with the daily log at the job site.

I. Copies of daily log forms shall be given to the Owner/Owner's Representative at the end of each week's work.

1.07 PROJECT REVIEW AND INSPECTION

A. The Owner, Owner's Representatives, Project Manager, and the representatives of agencies having lawful jurisdiction shall at all times have access to the work area whether work is in preparation or progress.

B. Throughout the removal and cleaning operations, monitoring for airborne asbestos fibers shall be conducted (on behalf of the Owner**)** to ensure that the Contractor is complying with all codes, regulations, ordinances, and requirements of this specification.

C. The Asbestos Safety Technician (Owner-selected) shall take Quality Assurance (Q.A.) Samples at the job site and provide Quality Assurance Inspections at no cost to the Contractor. The Contractor, however, shall be responsible for the added costs of the Asbestos Safety Control Monitor if (cost of both the technician and additional samples) the re-occupancy testing fails the 70 structures/mm2 Transmission Electron Microscopy Level, and/or if the agreed timetable for job completion is exceeded due to the Contractor's negligence (e.g. insufficient crew size, inadequate equipment/supplies, etc.). Also, the Contractor shall provide air monitoring, independent of the Asbestos Safety Technician, in order to determine OSHA regulations with regard to employee exposure to airborne asbestos fibers.

D. The Asbestos Safety Technician shall have the full authority to direct the procedures of the Contractor and to stop the project until work practices are corrected in order to reduce the fiber concentrations to acceptable levels as prescribed by this contract or meet the requirements of this specification.

E. The Owner reserves the right to stop all removal operations and cancel this contract if proper environmental, health, and safety precautions are not being implemented and adhered to by the Contractor and his/her personnel. If work procedures are not in compliance with this specification a "Stop Work Order" shall be issued to the Contractor by the Owner or Project Manager. No work shall recommence until authorized in by the Owner/Owner's Representative. Further noncompliance of these specifications or safety regulations shall be cause for cancellation of the contract.

1.08 PROTECTIVE CLOTHING AND EQUIPMENT FOR ASBESTOS REMOVAL

A. Listed below are materials, equipment, and tools generally used in asbestos removal operations. It is not inferred, however, that all materials listed are necessarily required in every asbestos removal project and, in some instances, materials required to complete the work may not be listed.

1. Protective clothing**:** Shall be fire retardant manufactured of "Tyvek" by DuPont (or approved equal) consist of disposable full body coveralls, head-covers, and boots as required by the most stringent OSHA standards applicable to the work.

2. Plastic Film**:** All plastic film used on this project shall be fire retardant. Provide a minimum, clear six (6) mil. in thickness polyethylene. The plastic sheeting shall be taped securely in place or stapled or fastened by spray-on adhesives, glue beads, horizontal wood battens, or the equivalent. Where work procedures are in view to the public, black or opaque six (6) mil polyethylene shall be utilized.

3. Adhesives: Tape shall be high quality tape (Asbestostape, duct tape, or approved equal) in 2" or 3" widths with an adhesive formulated to aggressively stick.

4. Disposal bags shall be six (6) mil polyethylene bags of a sufficient size for the application. The bags shall be printed with letters of sufficient size and contrast to be readily visible and legible. Each bag shall contain the U.S. DOT Class 9 (miscellaneous) hazardous material label.

5. Signs: Provide caution signs (14" x 20") red background, lettered in black. It shall be displayed at all routes of access and all visual and physical barriers. The sign shall meet OSHA Standards 29 C.F.R. 1926.1101.

6. Cleaning materials needed to maintain the specified standard of cleanliness. Use only the cleaning materials and equipment that are compatible with the surface being cleaned.

7. Respirator**:** Respirator protection shall be in accordance with OSHA Regulation 1926.1101 and ANSI Z88.2-1980. There shall be NO EXCEPTIONS to these requirements.

8. Air Filtering Equipment capable of filtering asbestos fibers.

9. HEPA Vacuum**:** High efficiency vacuum cleaners with special HEPA filtration to retain asbestos fibers, type "Nilfisk" #GA73 or "Pullman/Holt" #75 ASA (or approved equal). Also include a capillary tube if utilizing the Glove Bag technique.

10. Decontamination system shall consist of lockers, showers with pump support, respirator storage, equipment storage, etc. .

11. Hand Tools: Hand tools of sufficient quantity to implement the work at hand and the work schedule submitted including ancillary materials (e.g. staples, nails, wire, etc.).

12. Spray Equipment**:** Spray equipment capable of mixing wetting agent with water and capable of generating sufficient pressure, volume, and having ample hose length to reach all areas of asbestos.

B. It is the Contractor's responsibility to verify the detailed requirements of all codes, standards, and regulations to verify that the items procured for use in this work meet or exceed the specified requirements.

SECTION 01 ASBESTOS ABATEMENT

1.09 EMERGENCY PRECAUTION

A The Contractor shall prepare a contingency plan for emergencies including fire, accident, power failure, negative air system failure, supplied air system failure, or any other event that may require modification or abridgment of decontamination or work area isolation. Note that nothing in this specification should impede safe exiting or providing of adequate medical attention in the event of an emergency.

B. The Contractor shall provide barricades and adequate protection to safely prevent passage of persons to the area of removal. Must prevent accidental entrance to the abatement area by any building occupants.

C. Before the Contractor starts actual abatement of asbestos material, the local fire department and ambulance crews shall be notified as to the dangers of entering the work area. The Contractor shall make every effort to help these agencies and form plans of action should their personnel need to enter the contaminated area.

D. Local medical emergency personnel, both ambulance crews and hospital emergency room staff, shall be notified as to the possibility of having to handle injured work persons who are contaminated with asbestos dust. They shall be advised on safe decontamination procedures.

E. First aid shall comply with the governing regulations and all recognized recommendations within the industry.

1.10 DISPOSAL OF ASBESTOS-CONTAINING WASTE

A. All wastes generated within the isolated work area, including but not limited to, asbestos materials, plastic sheeting, tape, cleaning materials, protective clothing, all filers, brushes, pails, brooms and all other disposable material or items used in the work area shall be packed, sealed and disposed of according to this section.

B. The Contractor shall **not** allow asbestos materials to dry out or collect on the floors. Removed material shall be immediately placed in approved bags and sealed.

C. The material collected in each bag is to be sealed by twisting the open end and then tying an overhand knot in the twisted material (or other approved method, which will form a leak-tight seal). The bag is then placed in another bag, which is also sealed for transport to the disposal site. Broken bags will be re-bagged a third time.

D. Warning labels, having waterproof print and permanent, waterproof adhesive shall be affixed to all bags, dumpsters, trucks and other containers used for asbestos. Labels shall be conspicuous and legible

E. The contractor must place dumpster in designated area as outlined on drawing ASB-1. The dumpster shall be completely enclosed and locked. It is to be opened only for materials from the removal area. Warning signs shall be posted on the dumpster.

F. The Contractor shall maintain a bag disposal log numbering each bag of waste with an indelible black ink pen. Copies of this log shall be submitted to the Owner for the final payment.

G. The Contractor shall transport all sealed bags to an approved sanitary landfill disposal site. Disposal shall be in accordance with the Environmental Protection Agency and New Jersey Department of Environmental Protection.

1.11 QUALITY ASSURANCE AIR MONITORING

A. Air monitoring on this project (except OSHA compliance monitoring) will be conducted by the Asbestos Safety Monitor to furnish testing and reports of test results.

B. The Abatement Contractor is responsible for providing daily OSHA compliance monitoring as per 29 C.F.R. 1926.1101 at no cost to the Building Owner.

C. **New Jersey Post-Removal Sampling**. The purpose of this test is to establish the release criteria. The release criteria shall be $\leq$70 s/mm^2 by the average concentration of asbestos of five (5) air samples collected within the affected functional space and analyzed by the Transmission Electron Microscopy (TEM) Method in Appendix A of Subpart E of 40 CFR, Part 763 - "Asbestos-Containing Materials in Schools" is not statistically significantly different as determined by the Z-Test calculation.

D. Filter cassettes and sampling train shall be assembled as specified in NIOSH #7400. The flow rate shall be between 1 and 10 liters per minute. The total volume shall be a volume sufficient to achieve a detection limit of $\leq$70 structures per square millimeter.

E. Five clearance samples shall be collected within each containment area used to isolate the removal area.

F. If the post-removal air tests or final inspections fail to meet the evaluation criteria, the Contractor shall be liable for the cost of additional air tests and inspections conducted by the asbestos safety technician to verify compliance.

1.12 COMPLETION OF ABATEMENT WORK

A. Asbestos abatement work is complete upon meeting the work area clearance criteria and fulfilling the following:

1. Remove all equipment, materials, and debris from the work site.
2. Dispose of all asbestos-containing waste material.
3. Repair or replace all interior finishes damaged during the course of the asbestos abatement.
4. Fulfill project closeout requirements.

B. The Contractor shall submit a report to the Owner upon completion of the removal project. The report shall contain:

1. All Daily Logs
2. Operational Data
3. Summary of all daily OSHA compliance test results
4. Any updated medical reports
5. Proof that employee was notified if exposure levels exceeded current standards.
6 Documented proof (receipts) that all asbestos materials have been properly disposed of in a legal, regulated landfill.

C. Request for payment shall be withheld if all reports are not complete.

D. The report shall be signed by an authorized representative of the Contractor.