INVITATION FOR BIDS

IFB

Issue Date: May 16, 2003

Title: South Cunningham, Cox and Wheeler Dormitories Asbestos Abatement

Issuing Agency: Commonwealth of Virginia
Longwood University (214)
Bristow Building, Room #218
201 High Street
Farmville, VA 23909

Using Agency and/or Location where work will be performed: South Cunningham, Cox and Wheeler Dormitories, Longwood University

Period of contract: From Award of Contract through completion on July 28, 2003

Sealed Bids Will be Received until 2:00 P.M., June 12, 2003 For furnishing the Goods/Services Described Herein And Then Opened In Public.

All Inquiries For Information Should be Directed to: Mr. James E. Simpson, Director Materiel Management, Telephone: (434) 395-2093.

IF BIDS ARE MAILED, SEND DIRECTLY TO ISSUING AGENCY SHOWN ABOVE. IF BIDS ARE HAND DELIVERED, DELIVER TO: MATERIEL MANAGEMENT OFFICE, BRISTOW BUILDING, CORNER MAIN (U.S. BUSINESS 15) AND REDFORD STREETS, FARMVILLE, VIRGINIA.

In Compliance With This Invitation For Bids And To All The Conditions Imposed Therein, The Undersigned Offers And Agrees To Furnish The Goods/Services At The Price(s) Indicated In Section XX, Pricing Schedule.

* Virginia Contractor License No. _______________
Class:______ Specialty Codes: _____________

Name And Address of Firm:
___________________________________________ Date:___________________________
___________________________________________ By:________________________________
___________________________________________ (Signature in Ink)
___________________________________________ Name:_____________________________
___________________________________________ (Please Type or Print)
___________________________________________ Zip Code________________________
FEI/FIN No. ________________________________ Title:_____________________________
Fax No. (____)__________________________ Telephone No.(____)____________________

E-Mail Address

This public body does not discriminate against faith-based organizations in accordance with the Code of Virginia, 11-35.1 or against a bidder or offeror because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment.

* PREBID CONFERENCE: An optional prebid conference and site visit will be held on May 30, 2003 at 10:00 am at the Bristow Building Conference Room The purpose of this conference is to allow potential bidders an opportunity to present questions and obtain clarification relative to any facet of this solicitation. Bring a copy of the IFB with you to the conference.

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I. PURPOSE: The purpose and intent of this Invitation for Bids (IFB) is for Longwood University (LWU, Owner) to establish a fixed cost asbestos abatement contract with one (1) primary contractor. The term of this contract will be from award to completion July 28, 2003.

II. SCOPE OF WORK:

A. Scope:

1. Work Includes: The Abatement Contractor shall provide all labor, equipment, supplies, and materials for the complete removal and disposal of the asbestos ceilings from hallways and lounges in three Residence Halls: South Cunningham, Cox and Wheeler, and to remove asbestos from the ceiling and spray an acoustical finish on to the ceilings at two lounges. Attachment A has scaled floor plans of the Residence Halls with the area for asbestos removal and the installation of the acoustical finish highlighted. Attachment B has the specifications for the sprayed on acoustical finish. In general, the removal of the ceilings includes the removal and disposal of the asbestos, plaster, lathe and ceiling support system from the steel joist except in the areas to receive the sprayed acoustical finish. For the areas to receive the sprayed acoustical finish, the work will remove the asbestos and provide a sprayed on acoustical finish to the existing plaster. The University will be responsible for the removal and reinstallation of lights in all areas and the installation of the new ceiling except in the two lounges receiving the acoustical finish. The scope of work in South Cunningham is removal of asbestos ceilings in the ground, first, second and third floor. On the fourth floor of South Cunningham, the scope of work is to remove asbestos and spray on acoustical finish on the ceiling in the lounge and remove the asbestos ceiling in the hallway. In Cox, the scope of work is the removal of the asbestos ceiling in a lounge. In Wheeler, the scope of work is to remove the asbestos from the ceiling and spray on an acoustical finish for the ground floor lounge and to remove the asbestos ceiling in the hallways at the first, second, third floor. The work must be completed by July 28, 2003. The work in Wheeler must be scheduled around a conference. The conference is scheduled for June 27 through July 18. The University must approve the work schedule in Wheeler prior to the start of work.

2. Removal of approximately 35,000 sq. ft. of sprayed on ACM fireproofing in all three buildings. All removal procedures shall take place under full containment and schedule of removal will be determined at the discretion of the University.

Bidder should be aware of schedule constraints where buildings need to be put back in use prior to the 2003-2004 school year. This includes “put-back” times for all other trades involved in the completion of this contract.

B. Examination of site, Quantity of work, and Time of Completion:

The Contractor shall examine the site of the work, the quantity of work, and the time of completion, and satisfy himself that the work can be completed as set forth in these specifications. All trips for the purpose of site inspections shall be made by appointment through the Owner or his representative.

C. Procedure and Methods:

Notwithstanding any general clauses, working, paragraphs, or other references contained in the plans, specifications, general conditions or elsewhere in the Special Provisions, the Industrial
Hygienist is not charged with the responsibility of directing the actual procedures and detail methods of construction to be used by the Contractor in accomplishing the work contained in the contract between the Owner and the Contractor, nor is the Industrial Hygienist responsible to act as Superintendent, Foreman, or safety engineer for the Contractor, nor for the safety of the Contractor’s personnel.

D. Inspection:

The representative of EPA, OSHA, NIOSH, and state or local organizations having authority or Owner and owner representative shall have access to the work site, materials, records of personnel and other relevant data and records. The Contractor shall provide proper facilities for such access and inspection.

While performing asbestos removal work, the Contractor shall be subject to onsite inspection by the Owner’s representative who may be assisted by safety or health personnel. If the work is found to be in violation of the Specification the Owner’s representative will issue a Stop work Order to be in effect immediately and until the violation is resolved. Standby time required to resolve the violation shall be at the Contractor’s expense.

E. Sequence of Operations:

The Contractor shall start at the point (see Attached floor plan, if applicable) designated by the Owner and shall proceed with the sequence of removal as the Owner directs. One phase is to be completely clean of asbestos and has passed a final air test before another phase may be started. The Contractor shall provide sufficient crews to complete the job within the time specified. In general, and unless described elsewhere herein, the Contractor shall isolate each area, renovate that area, test and place in service the work area prior to proceeding to their next work area. The Contractor may, however, submit a differing schedule of operations to the Owner’s representative and the Industrial Hygienist. This schedule of operation must be agreed upon by all parties prior to start of work activities.

III. WORK AREA:

A. Prior to beginning abatement procedures, the Contractor shall post all OSHA and EPA documents and approved warning signs, as a minimum, and provide any physical barriers as may be required to protect his equipment as well as the work area from being entered by any unauthorized person(s).

B. It shall be the Contractor’s responsibility to secure the work area (Reference Special Conditions Section 11 “Security” of these specifications) from entrance by unauthorized personnel. Only approved personnel whose names are submitted to the Contractor prior to starting abatement procedures shall be allowed in the work area.

IV. WORK AREA PREPARATION-CONTAINMENT REMOVAL

The following subsections are describes as minimum to prepare the work area. If the general arrangement of ingress and egress or work area isolation differ from that described herein, the Contractor shall submit a detailed description to the Industrial Hygienist for approval prior to start of work activities.

A. Owner Property
1. Contractor shall HEPA vacuum and then wet wipe all equipment that remains in the work area such that they are clean of all asbestos material and will not contaminate the storage area.

2. All permanent Owner property remaining in the work area shall be decontaminated by wet wiping and HEPA vacuuming, then stored along with other equipment. Permanently installed (fixed) items need not be removed from the work area but shall be protected during renovation operations and decontaminated both prior to installation of plastic and then again during final clean up procedures.

B. Entrances, Exits, and Decontamination Unit

1. All means of ingress and egress shall be protected by means of a dual airlock compartment. The dual airlock shall be so constructed that only one airlock shall normally be open as personnel pass through. In addition, the primary ingress and egress shall be set up to be decontamination station, consisting of a secure clean room area, a shower wash/cleanup area, and an equipment storage area (if necessary).

2. The decontamination unit shall be so constructed as to not allow air to be transmitted through its walls. The number of entrances and exits to the work area shall be kept to a minimum. Only one primary means of ingress shall normally be allowed. The Contractor shall request in writing, with adequate explanation, the need for more than one (1) means of ingress. However, if practicable there shall be more than one means of egress; however, one(1) shall be used under normal operations and the second or others shall be special purpose exits or emergency exits.

3. All exits shall be marked in bold lettering “EXIT” or “EMERGENCY EXIT ONLY”.

C. Sealing the Work Area (Isolation)

1. The work area shall be sealed (covered) with plastic sheeting. All windows, non-utilized doors, heating, ventilation, and air conditioning ducts or openings, sky lights or other openings shall be sealed first by taping securely in place clean plastic sheeting. All non-removable items and equipment in the work area shall be isolated in place with securely fastened/sealed plastic sheeting.

2. Once all items and opening have been sealed or removed, the entire work area (except the areas to be removed) shall be covered with minimum of two (2) layers of plastic sheeting on walls; the outer layer consisting of a minimum 6 mil thickness and the inner layer consisting of a minimum of 6 mil thickness. Two layer of 6 mil plastic sheeting shall be placed on the floors. Each section of sheeting shall be securely fastened on the next providing an air watertight seal. The intent is to not allow any materials or airflows to escape from the covered areas.

3. During the installation of the first layer 6 mil plastic sheet(s) the floor sheet(s) shall be
extended up the wall from the floor of a minimum of eighteen (18”) inches and the wall sheet(s) shall be placed on the inner side (away from the wall) of the floor sheet(2) and securely sealed.

4. All joints in the 6 mil plastic sheeting shall have a minimum of twelve (12”) inches of sheet overlap and be securely sealed from air, water, and moisture.

D. Post Isolation, Prior to Asbestos Removal Operations

After work area isolation, the Contractor shall remove all detachable electrical, heating, ventilation, air-conditioning equipment or ducts, or other items located on or in contact with the asbestos material. These items shall be vacuumed with the HEPA filtered vacuum and wet cleaned, wrapped in 6 mil plastic, and stored in the work area in secure area. Any items requiring special protection such as corner guard, wall molding or fixtures shall be thus protected to the satisfaction of the Industrial Hygienist however, the protection from damage shall be the sole responsibility of the Contractor.

E. Work Area Ambient Air Pressure

1. Provide a local exhaust system, ducted to the outdoor, in the asbestos control area which will produce a negative air pressure in comparison to the area outside the asbestos control area. Local exhaust system equipment shall be located opposite and at the farthest side from the make-up air entrance to the work area. Equip exhaust units with HEPA filters capable of trapping fibers to 0.3 microns at 99.97% efficiency. Local exhaust equipment shall be supplied in sufficient quantity to produce at least four changes per hour in the removal area and provide a pressure differential recorder with alarm or manometer with strip chart recorder or manehelic gauge. On-site personnel will know how to operate, read and zero the units. Also a spare negative pressure unit shall be available at all times on the site to ensure continuous negative air operations. The exhaust units shall be started before beginning activities which could cause fiber release and shall run continuously to maintain a constant negative pressure unit decontamination of each Work Area is complete. The units are not to be turned off at the end of the shift or when removal operations temporarily stop. The Contractor is responsible for the maintenance of all equipment at all times including non-working hours. In no case shall the building ventilation system be used as part of the local exhaust system for the asbestos control area, nor shall any fans or room ventilators be in operation during removal work.

2. It shall be a requirement of the contract that a negative air pressure be kept at a negative 0.02 5 inches of water in the work area and no lower than negative 0.020 inches water. If negative pressure falls at or below .020 inches of water, all abatement work is to stop until the negative pressure is brought up to the standard. From the time the work area is first isolated with plastic any air exhausted from the work area necessary to maintain this negative pressure shall be exhausted through a HEPA filter. The air handling units (s) shall so equipped as to indicate when the HEPA filters require replacing. Equipment failure is not a valid reason for not maintaining a negative pressure and any non-functioning equipment shall be replaced as soon as possible.
3. No removal work activities shall be allowed if the negative pressure air handling equipment is not functioning.

V. PRE-REMOVAL WORK INSPECTION

Once the Contractor has set up the decontamination area, secured the plastic barriers, has the approved respirator equipment in operation, has the negative pressure system operating, has a HEPA vacuum on site, outlines the procedure for removing waste asbestos material from the work area, and has the log book in order, a pre-removal inspection shall be held by the Industrial Hygienist. This inspection shall determine whether appropriate procedures as specified herein have been followed in setting up the work area. The Contractor shall remedy any inefficiency prior to beginning the removal operation. The daily log shall be signed by the Industrial Hygienist and Contractor noting that this inspection was held and the Contractor may then proceed.

VI. REMOVAL OPERATIONS

After all work area isolation procedures have been satisfactorily performed, and the pre-removal inspection approved by the Industrial Hygienist, the Contractor shall begin asbestos materials removal operations.

The Contractor is responsible for providing all ladders, scaffolding, scrapers, materials, and safety equipment to be used on this project.

All material which is brought into the work area must be either decontaminated or disposed of as asbestos waste.

The negative pressure system shall provide adequate capacity to remove air from each room of the project area which is undergoing removal operation. The negative pressure shall be designed to provide complete air changes each 15 minutes in the area undergoing removal work.

A. Handling of Asbestos Contaminated Material

All asbestos material or items which are contaminated with asbestos fibers shall be placed in properly marked 6 mil polyethylene bags.

1. Where possible, the method of removal shall allow material to fall directly into containers. NO asbestos material shall be allowed to fall greater than 10 feet to the floor without intermediate catching equipment or devices unless written permission from the Industrial Hygienist is obtained. Upon removing all gross quantities of asbestos materials and bagging or wrapping in proper waste disposal bags or container, the Contractor shall again clean all surfaces which contained asbestos material with a brush to remove difficult or deep latent asbestos fibers.

2. During each day’s work the bulk asbestos material shall be cleaned and bagged before it dries. No asbestos material shall be allowed to lay on the floor overnight.

3. Bags shall be marked in accordance with OSHA and EPA standards as containing asbestos materials.
Once asbestos material is bagged the following procedures will be followed:

1. Bags will be twisted and sealed with duct tape. The neck of the bag will then be “goose-necked” (turned 180 degrees) then re-taped with duct tape.

2. Bags shall then be stored inside the work area or special designated area.

3. To remove sealed bags from the work area, workman will use brushes to remove any gross asbestos debris from the bag’s exterior. Bags will then be passed through the debris port (air-locks) to another worker manning the chamber. The worker in the chamber will hold open a 6 mil polyethylene bag and double bag each bag as it is passed through twisting, sealing and “goosenecking” the second bag. The double bagged item will then be passed through the outer door of the airlocks.

4. All bagged material moved out of the sealed work zone will be immediately disposed in a truck or storage container in accordance with YR 672-20-10 regarding closed conveyance. Storage Containers will be designed to prevent exposure from wind, weather, pedestrian traffic and which can be closed and locked.

5. The number of bags taken from the work area will be recorded in the contractor’s daily log.

B. Amended Water

1. All water used for wetting asbestos-containing material prior to removal or used in cleanup procedures shall contain a surfactant. The surfactant recommended by EPA but no specifically required by this contract is 50 percent polyethylene ether and 50 percent polyoxyethylene ether at a concentration of 1 ounce per 5 gallons of water.

2. Application rates will vary with the asbestos-containing materials, its surface conditions, and its substrate. This is to be determined by the Contractor to achieve the optimum application rate.

C. Inner Layer Plastic Sheet Removal

1. Once the asbestos containing material have been removed and all non-removed items have been cleaned, the inner layer of plastic sheeting shall be wetted with amended water and removed by carefully rolling or folding from the ceiling or outer extremes of the room toward the center of the room. This procedure of rolling or folding into itself should be continued until the entire inner plastic layer or sheeting along with all its contents is contained in the center of the room.

2. The inner plastic layer and all of its contents shall then be placed in a disposal drum(s) as previously described, and stored for disposal.

3. While this inner layer is being removed any tears or damaged areas in the primary
layer of plastic sheeting shall be repaired.

VII. POST-REMOVAL WORK INSPECTION
Once the Contractor has removed all visible asbestos-containing materials, and is read for final cleanup, a post removal work inspection shall be held by the Industrial Hygienist. This inspection shall determine whether all materials have been removed and the area cleaned up prior to proceeding with the next work activity. The Contractor shall remedy any deficiency prior to beginning the final cleanup operations. The daily log shall be signed by the Industrial Hygienist and Contractor noting that this inspection was held and the Contractor may then proceed.

A. Sealing (encapsulating) Exposed Surfaces

After a successful visual inspection the Contractor shall spray all dried, exposed surfaces with an encapsulant such as Serpiflex Shield, BWE 5000, Mateson Chemical Cover-up or equal. The Contractor shall provide Material Data Safety Sheets (MSDS) for the encapsulants. The surfaces to be coated shall include surfaces from which the asbestos containing materials have been removed.

VIII. POST-REMOVAL OPERATIONS
Following the removed asbestos contaminated surfaces operations described above, the following procedures shall be followed:

A. Outer Layer Plastic Sheeting Removal

After the Industrial Hygienist has given approval or removal operation, the plastic sheeting shall be removed. **However, all critical barriers shall remain in place.** The plastic sheeting shall be wetted with amended water and carefully rolled or folded toward the center of the chamber thus trapping and collecting all residual asbestos containing materials. Any equipment should be carefully cleaned with amended water prior to removing the plastic sheeting from under it to allow any asbestos containing material affixed to the equipment to fall onto the plastic sheeting before it is removed.

After carefully collecting the plastic sheeting and all remaining asbestos containing materials in the center of the room, it shall be disposed of in bags as described previously in this section.

B. Final Cleanup

Once the outer layer of plastic sheeting has been removed, all work area wall, any latent suspect materials plastic sheeting over openings, floors and other equipment in the work area, including the decontamination unit,
shall be thoroughly wiped down with amended water. The work area should be allowed to dry and the process repeated a second time (as a minimum). However, critical barriers on any opening and windows and doors shall not be opened and free flow of air from the work area is still not allowed.

The Contractor shall inspect the work area and insure himself that it is clean to his satisfaction prior to final project cleanliness testing.

C. Final Air Testing

Air testing shall be taken at this point to determine final project release of asbestos removal subcontractor. Procedures shall be as described in Section 5 “Project Clearance Testing.”

IX. PROJECT CLEARANCE TESTING

The determination of the cleanliness of the work area shall be performed by the Industrial Hygienist at no expense to the Contractor. The final cleanliness level of the work area shall be 0.01 fibers per cubic centimeter (f/cc) or less as determined by phase contrast microscopy or less than 70 structures per cubic centimeter as determined by transmission electron microscopy. All clearance sampling shall follow AHERA protocol as described in AHERA 40 CFR part 763.

The Contractor shall notify the Industrial hygienist a minimum of 8 hours prior to need of final air testing. Failure to supply adequate notification could lead to delays in the testing procedures of which the Contractor shall not be given compensation. The Owner shall pay for (1) final test. If additional test are required, then the Owner shall pay for these test and deduct this amount from the contract lump sum price

If the results of the air testing show airborne fiber levels above 0.01 f/cc, or 70 structures, the Contractor shall return to the work area and re-clean the area as required to ensure adequate cleanliness is obtained a specified above.

X. DISPOSAL OF WASTE

All sealed bags containing asbestos contaminated materials shall be thoroughly wiped down to remove gross asbestos contamination prior to being removed from the work area then double bagged prior to begin removed form the air-lock or decontamination (wash room) unit.

Bags shall be stored outside the work area in a secure enclosed tailor or structure made of material impermeable to wind, weather, pedestrian traffic and located out of direct eye contact by the public. Bags shall be orderly stacked and secured as to prevent damage during transportation.

All local, state, and federal permits shall be obtained as well as all required vehicle marking during loading, unloading and prior to transporting the bags to an approved asbestos disposal landfill.

Transportation in open trucks or vehicles is prohibited; only totally enclosed vehicles shall be allowed in accordance with VR-672-20-10.

During loading operations all bags shall be recorded in a logbook as to the number of bags loaded on the truck.
Trip tickets, signed and stamped received by the landfill operation personnel, indicating the date, time, number of bags accepted and approximate location of disposal in the landfill shall be submitted to the Owner as proof of material disposal.

The transport vehicle shall be checked after each trip to insure that no latent asbestos materials are present. If any asbestos containing suspect materials are found, the vehicle shall be wiped down with amended water prior to reuse.

Whenever sealed and loaded disposal bags are being handled by Contractor or other personnel, the personnel shall be provided with respirator protection equipment as described in the “Safety” section.

XI. FINAL DISPOSAL SITE

All disposal bags and their contents shall be transported as described above to a landfill. The landfill shall meet all deferral, state, and local approvals as an asbestos approved disposal site. Documentation shall be presented to the Owner within 35 days of project completion indicating, the above mentioned approvals, the approximate location of the landfill, the approximate location of the asbestos disposal area within the landfill, and any other pertinent data or requirement as stated in these specifications or required by federal, state or local environmental agencies.

While unloading bags at the final disposal site the Contractor shall provide his personnel with respirator protection equipment as described in the “Safety” Section. In addition, the Contractor shall supply the landfill operator and any of his personnel working in the disposal area with a respirator during unloading operations and contaminated material burial operations.

XII. DECONTAMINATION PROCEDURES

Once the asbestos containing material or items attached to the asbestos containing material has been disturbed, all personnel shall ingress and egress through the decontamination area only (except for emergency situations). The following general procedures shall be adhered to when personnel are entering the work area:

A. All workers shall change work clothes at the designated change areas prior to the start of the day’s work. Lockers or other acceptable substitutes should be provided by the Contractor for the storage of the workers’ clothes and personal belongings.

B. All workers and authorized visitors shall, each time they leave the work area: remove gross contamination from clothing before leaving the work area; proceed to the equipment room and remove all clothing except respirators; soap and water while showering; remove the respirator; thoroughly shampoo and wash themselves.

Following shower and drying off, each worker and authorized visitor shall proceed directly to the clean room and dress in their street clothes.

C. All clothing, towels and other asbestos contaminated materials shall be disposed of as asbestos contaminated materials.
D. These procedures shall be adhered to whenever the workers exit the work area including breaks, lunch, end of day, or being called out of area.

E. Water, showers, towels, soap, and hygiene conditions shall be the responsibility of the Contractor. If these facilities do exist within the work area, arrangements may be coordinated with the Owner, and may be utilized if the Owner’s written permission is received and they fit in the authorized arrangement for the decontamination unit.

F. All footwear shall remain inside the work area until the completion of the project, then only plastic or rubber footwear thoroughly cleaned shall be removed. All other footwear shall be disposed of as asbestos containing waste.

G. Only equipment necessary for the asbestos abatement operations shall be allowed in the work area and should therefore not be allowed to be taken into the decontamination unit.

XIII. WASTE WATER DISPOSAL

All wastewater produced from the decontamination process or excess from the work area shall be passed through a 3 to 5 micron filter specifically designed for the removal of asbestos containing particles from water prior to final disposal.

Final disposal shall be into the local sanitary waste disposal system or local approved for asbestos disposal landfill not on the ground, in a septic tank, or the storm sewer at the work site. If the Contractor wishes to dispose of the filtered wastewater into the local sanitary sewer system, he must obtain in writing form the local wastewater authority the following:

A. Permission to discharge into the local sanitary sewage system.

B. A statement indicating that the contractor’s filtering system has been inspected by the local wastewater authority and is acceptable.

XIV. PROJECT LOG BOOK

A log book, containing as a minimum the information listed below, shall be kept on the jobsite and be available to inspection by the Owner, his representative, or the Engineer during normal working hours.

At the conclusion of the project, prior to final payment, three(3) complete, bound copies of the log book shall be submitted to the Owner and the Industrial Hygienist.

A. Pre-work Documentation

This section shall contain any EPA, OSHA, or state notifications forms, any necessary state, country or city licenses or permits (including contractor licenses, building permits, disposal permits, etc.). Record regarding insurance, bonds, and size of bonds.

B. This section shall contain personnel employment record, worker training certificates, Virginia asbestos licenses, certificate of worker’s physical, respirator training and fit test verification.
C. Notification Data

This section shall include data which will allow the Owner to notify each worker, the worker’s family and responsible contractor parties if any emergency should arise.

D. Sign-in Sheets

This section shall contain the daily sign-in sheets. This daily sign-in sheet (log) shall be kept daily by the project superintendent and placed in the project log book at the end of each day’s work. The daily log shall include:

1. Name of the person entering the work area.
2. Time the person entered the work area.
3. Time the person exited the work area.
4. Date
5. Brief description of day’s work activities.
6. Brief description of any damage to hems in the work area.
7. If negative air pressure was present in work area, and if not why and what time said negative pressure was not present.
8. Brief description of weather conditions including approximate outside and inside work area temperatures.
9. Each daily log sheet shall be signed and dated by the project superintendent.

E. This section shall include any information concerning project subcontractors including work to performed names and dates on jobsite.

F. Air Monitoring

All air sampling performed by the Contractor shall have the result included in this section. Area air sampling and personnel air sampling should be included. A description of the sampling methods, location and test methods shall also be included, the name and location of the laboratory performing the analytical testing Shall be listed. Results of sampling shall be posted at the job site within 72 hours of sampling.

G. Waste Disposal

This section shall include the location, date, and time of all wastewater disposals. Also signed and
dated trip tickets by the landfill disposal operator stating the number of disposal drums accepted, the location of the landfill shall also be mentioned.

H. Miscellaneous

This section shall be included to report all injury/illness reports of employees, inspection reports by EPA, and OSHA or other government agencies, or any other pertinent information the Contractor may wish to include.

XV. COMPETENT PERSON

The Contractor shall have a Competent Person/Supervisor present at all times work on this contract is in progress.

The Competent Person/Supervisor shall be thoroughly familiar and experienced with asbestos removal and related work and shall be familiar with and shall enforce the use of all safety procedures and equipment. He shall be knowledgeable of all EPA, OSHA, and NIOSH requirements and guidelines.

In addition to the Competent Person/Supervisor, the Contractor shall furnish one (1) or more foremen who are familiar and experienced with asbestos removal and its related work, safety procedures, and equipment.

Proof of the foreman’s experience shall be available upon request.

A. It shall be a requirement of this contract that the Competent person and for one (1) or more of the Contractor’s foremen be inside the work area at all times while work is in progress.

B. It is the intent of these specifications that all phases of the work shall be executed by skilled craftsmen experienced or receiving training by experienced personnel in each respective trade. The experience records of each of the craftsmen shall be available upon request.

XVI. PROJECT CLEANUP

To the greatest extent possible, it shall be the intent of these specifications to keep a clean orderly work area.

After final project testing all Owner materials that were removed from the work area shall be replaced in the appropriate area.

As mentioned previously, if possible, the asbestos containing materials should be removed directly into disposal containers. This may not always be possible. When materials are allowed to fall to the floor efforts shall be made to place the material in the disposal containers as soon as practicable.

Owner will designate toilet facilities for use by the Contractor. Any employee leaving the work area shall follow all decontamination procedures necessary or as described herein. It is the contractor’s responsibility to maintain the toilet facilities clean and orderly.
XVII. TOILET FACILITIES

Owner will designate toilet facilities for use by the Contractor. Any employee leaving the work area shall follow all decontamination procedures necessary or as described herein. It is the contractor’s responsibility to maintain the toilet facilities clean and orderly.

XVIII. EATING, DRINKING, SMOKING

No smoking, eating, or drinking shall take place inside the work area. Prior to smoking, eating or drinking, the workers shall fully decontaminate as described previously. Upon returning to the work area, the worker shall don new protective clothing.

The worker may wear the uncontaminated protective clothing outside the work area prior to returning into the work area.

XIV. PAYMENT

Compensation for work covered under this Section shall be included in the lump sum price for the asbestos abatement program as specified herein.

SAFETY

I. GENERAL

The Contractor shall comply as a minimum, with the Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act (051-IA) of 1970 (P.L.91-596) and under Section 107 of the Contract Work Hours and Safety Standard Act (PL 91-54).

Particular mention should be made to OSHA 1926.1101 and DHEW (NIOSH) publications Nos. 78-193A and 78-193B.

The Contractor alone shall be responsible for the safety, efficiency, and adequacy of his equipment, appliances, and methods, and for any damage or contamination which may result from their failure or their improper use, maintenance or operation.

A. The Contractor shall designate a responsible member of his organization on the work site, whose duty shall be the prevention of accidents. In the absence of notice to the contrary, filed in writing to the Owner, the Owner’s representative, or the Engineer, or in the designated person’s absence, this person shall be the Project Superintendent.

B. The Contractor shall assume all responsibility for any toxic effects to workers from air supplied respirator, effects of airborne encapsulant particles, mist, or vapors, or any wetting agents utilized and the disposal of said wetting agent(s) and any residual toxic damaging residues to personnel or property.

II. WORK CREWS

The Contractor shall be responsible for setting the size of his work crew; however, during removal
operation a minimum of two (2) workers shall be in the work area at one time. Workers should not be allowed to work alone within the work area.

Work platforms may be provided for overhead work requiring elevating the workers. It shall not be permissible to allow more than one (1) worker to work from any one ladder; multiple ladder or work platforms shall be utilized.

III. ELECTRICAL

During the removal operations the contractor may be placing his workers in a potentially hazardous electrical environment. Care and special consideration should be exercised by the Contractor to avoid electrical shock to his employees. The requirements as set forth in the National Electrical Code, latest edition, shall be adhered to all times.


Whenever and wherever necessary the contractor shall de-energize the existing electrical power and install temporary electrical power in the work areas where building electrical power is not required.

IV. RESPIRATORY PROTECTION

A. General

All respiratory protection programs shall be established in accordance with the respiratory protection requirements of 29 CFR 1910.134 and 29 CFR 1926.1101. These regulations shall be considered a requirement of these specifications.

During renovation activities involving asbestos containing materials, employees of the Contractor may be exposed to high concentrations of asbestos fibers for short periods of time. When an employee is exposed to concentrations of airborne toxic materials which are above the maximum standards established by the OSHA, the law requires implementation of feasible engineering controls and/or administrative controls to reduce employee exposure. For the renovation activities described herein for this project, these controls shall not be considered as feasible and as an alternative the Contractor must provide respiratory protection for his employee conducting renovation work on the asbestos containing materials. In addition to providing respiratory equipment, the Contractor has the responsibility of implementing a respiratory protection program. The following subsection provides for the establishment of standard protection program, but does not relieve the Contractor from the implementation or enforcement of said program.

B. Respiratory Program Administrator

The Contractor shall designate an administrator for his respiratory program. This person shall be responsible for the implementation and enforcement of the provisions and procedures set forth in the respiratory protection program. The Contractor shall submit the name of the program administrator to the Owner, Owner’s representative or the Engineer. In the absence of notice to the contrary, filed in writing with the Owner, Owner’s representative, or the Engineer, this person shall be assumed to be the Project Superintendent.
C. Selection and Use of Respiratory Protection Equipment

All respirators used shall be selected from those approved by the National Institute of Occupational Safety and Health (NIOSH) for use in atmospheres containing asbestos fiber. A NIOSH approved respirator contains the following: an assigned identification number placed on each unit; a label identifying the type of hazard the respirator is designed to protect against; additional information on the label which indicates limitations and identifies the component parts approved for use with the basic unit. The above mentioned approved respirators shall be worn for the renovation work conditions as specified below:

1. The employer shall provide a PAPR for Class I and II work and Class III work where TSI of surfacing ACMIPACM is disturbed

2. The employer shall provide a full-face pressure demand supplied air respirator with auxiliary SCBA for all class I work.
   a. Airborne concentration less than 1 f/cc: half mask air purifying respirators equipped with high efficiency filters.
   b. Airborne concentration less than 5 f/cc: full face piece air purifying respirator equipped with high efficiency filters.
   c. Airborne concentration less than 10 t/cc: powered air purifying respirator equipped with high efficiency filters or supplied-air respirator operated in continuous flow mode.
   d. Airborne concentration less than 100 f/cc: full face piece supplied-air respirator operated in pressure demand mode.
   e. Airborne concentration greater than 100 f/cc or unknown concentration: full face piece supplied-air respirator operated in pressure demand mode equipped with an auxiliary.

D. Personnel Fitness

Only those individuals who are medically able to wear respiratory protection equipment shall be issued one. Before being issued a respirator, an employee of the Contractor shall have received a medical and physical examination.

E. Respirator Fit Tests

Each employee determined medically fit to wear a respirator shall be qualitatively fit-tested upon receiving his equipment and then regularly throughout the project. Methods for fit-testing shall be those described in Appendix C of 29 CFR 1926.1101 “Qualitative and Quantitative Fit testing Procedures”.

V. PERSONNEL EXPOSURE MONITORING

The Contractor shall provide personal exposure monitoring as required by OSHA regulation 29 CFR 1926.1101. Personnel air monitoring results shall be posted within 72 hours of sampling.
The Owners representative shall provide air monitoring outside the asbestos control area at all times during removal.

VI. PROTECTIVE CLOTHING

It shall be a requirement of this Contract that protective clothing be worn during the actual removal of asbestos-containing material (protective clothing shall be worn by all personnel inside the work area during application of the sealant). The requirement of protective clothing as specified herein shall be supplementary to any and all requirements or guideline for protective clothing as set forth by EPA or OSI-IA as it pertains to asbestos abatement projects.

A. Clothing

Coveralls recommended for asbestos exposure, such as the disposable type shall be worn at all times while inside the work area. These coverall shall cover the body, full length of legs and full length of arms. head hoods may be included, be shall be covered elsewhere in specifications. Street or work clothes may not be worn underneath the coverall unless disposed of as asbestos contaminated waste at the end of the project. Clothes worn over or underneath the coverall shall no be removed from the work area for the duration of the project. No street clothes or work clothes may be worn underneath the coverall unless disposed of as asbestos contaminated waste at the end of the project.

B. Foot Covering

Foot covering shall include shoes, boots, and/or covering of shoes. High top rubber boots are recommended but not required. Regardless of the foot protection chosen, they must remain inside the work area for the duration of the project. All footwear other than rubber shoes or boots shall be disposed of as asbestos contaminated waste at the end of the project.

C. Head Covering

Head covering shall be worn on this project at all times. This may be a hood attached to the coveralls, a separate hood, or surgeon’s cap. A hard hat alone is not acceptable. The head covering shall be worn underneath the hard hat but over any respiratory protection equipment. Whenever there is the danger of overhead falling objects, or workers working overhead, all workers below shall wear hard hats which meet current ANSI Standards. Hard hats shall not be removed from the work area until thoroughly cleaned by set washing.

D. Other Protective Equipment

Protective gloves shall be worn by all employees involved in scraping or removal operations inside the work area. Sweat bands, knee pads, watches, rings, etc., shall not be allowed to be removed from the work area but shall be disposed of as asbestos waste.

E. Sealing Clothing
Pant legs shall be securely sealed to the footwear with tape thus reducing the possibility of allowing asbestos entrapment. Shirt sleeves shall have elastic closures at the wrist or be taped as to be secure around the wearer’s wrist. Short pants or short sleeve overalls will not be allowed as they cannot be sealed adequately.

F. Removal of Clothing from the Work Area
Only rubber, metal or plastic articles of clothing, footgear, or headgear shall be removed from the work area. Prior to removing any item from the work area, it shall be thoroughly cleaned and washed as described in the decontamination procedures. All non-rubber, non-plastic or no-metal items shall be disposed of as asbestos containing waste and not removed from the contaminated work area.
XX. Pricing Schedule:

The Bidder agrees to provide the abatement services in compliance with the requirements of this IFB.

Cost for Abatement as listed in the Scope Of Work – Section II.

<table>
<thead>
<tr>
<th>Location</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Cunningham (Lump Sum)</td>
<td>$__________________________</td>
</tr>
<tr>
<td>Cox (Lump Sum)</td>
<td>$__________________________</td>
</tr>
<tr>
<td>Wheeler (Lump Sum)</td>
<td>$__________________________</td>
</tr>
</tbody>
</table>
Cunningham Fourth Floor Plan

1 length equals 8’ - 0’
SPRAYING OF ACOUSTIC CEILINGS SPECIFICATION GUIDE
SONA SPRAY “FC”

1.0 SCOPE OF WORK:

The work shall include all materials, equipment, labor and services required to install a sprayed cellulose fiber acoustical finish system on interior surfaces in accordance with the drawings and specifications.

1.1 SUBMITTALS:

Provide two copies of independent test reports of:

NRC Values per ASTM C-423 conducted by a NVLAP certified testing laboratory.

<table>
<thead>
<tr>
<th></th>
<th>125</th>
<th>250</th>
<th>500</th>
<th>1000</th>
<th>2000</th>
<th>4000</th>
<th>NRC</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.50**</td>
<td>.08</td>
<td>.16</td>
<td>.46</td>
<td>.87</td>
<td>1.07</td>
<td>1.12</td>
<td>.65</td>
</tr>
<tr>
<td>0.75***</td>
<td>.25</td>
<td>.36</td>
<td>.74</td>
<td>.98</td>
<td>.99</td>
<td>.99</td>
<td>.75</td>
</tr>
<tr>
<td>1.00***</td>
<td>.12</td>
<td>.38</td>
<td>.88</td>
<td>1.16</td>
<td>1.15</td>
<td>1.15</td>
<td>.90</td>
</tr>
</tbody>
</table>

*on solid backing  **on lath/plaster

2.0 MATERIALS:

The sprayed fiber system shall consist of white cellulose fibers treated with fire retardant chemicals and mixed with adhesive diluted at the rate of 4 parts water to 1 part. The system shall contain no natural or man-made mineral fibers such as asbestos, rock wool or glass fiber.

2.1 DELIVERY & STORAGE:

All materials shall be delivered to the job site and stored until used in sealed, original containers, marked by the manufacturer with a description of the contents, the date of manufacture and the lot number. Storage shall be in clean, dry spaces. The temperature of spaces used for adhesive emulsion storage shall be maintained above freezing at all times.

2.2 MATERIALS TESTING:

The finish system shall have been tested and the test results documented by the manufacturer in accordance with standard test methods as follows:
2.21 FIRE SAFETY:

<table>
<thead>
<tr>
<th>PROPERTY TESTED</th>
<th>RESULTS</th>
<th>TEST METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Resistance</td>
<td>Class A</td>
<td>ASTM-E-119</td>
</tr>
<tr>
<td>Flame Spread Index</td>
<td>5</td>
<td>ASTM-E-84/UL723</td>
</tr>
<tr>
<td>Smoke Developed</td>
<td>5</td>
<td>ASTM-E-84/UL723</td>
</tr>
<tr>
<td>Fire Hazard Rating</td>
<td>Class I</td>
<td>FM Test Procedures</td>
</tr>
<tr>
<td>Fire Retardant Ctg.</td>
<td>Qualifies</td>
<td>FM Test Procedures</td>
</tr>
</tbody>
</table>

Manufacturers written certification that product contains no asbestos, fiberglass or other man made mineral products.

2.22 PHYSICAL CHARACTERISTICS:

<table>
<thead>
<tr>
<th>PROPERTY TESTED</th>
<th>RESULTS</th>
<th>TEST METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Reflectivity</td>
<td>73+</td>
<td>ASTM C-523</td>
</tr>
<tr>
<td>Air Erosion</td>
<td>.018 gms/cf max</td>
<td>E-859</td>
</tr>
<tr>
<td>Moisture Absorption</td>
<td>13% max</td>
<td>C-739</td>
</tr>
<tr>
<td>Bond Strength</td>
<td>&gt;600 psf</td>
<td>E-736</td>
</tr>
<tr>
<td>Noise Reduction Coefficient (NRC)</td>
<td>.65 min @ ½ in.</td>
<td>C-423</td>
</tr>
<tr>
<td>Thermal Resistance®</td>
<td>4.7 min. @ 1 in.</td>
<td>C-518</td>
</tr>
<tr>
<td>Dry Density</td>
<td>5 pcf ± pcf</td>
<td>-</td>
</tr>
<tr>
<td>Compression Strength</td>
<td>&gt;400 psf</td>
<td>E-736</td>
</tr>
</tbody>
</table>

2.3 CODE & REGULATION COMPLIANCE:

The system shall have been submitted and accepted, approved, listed, or meets the following code and regulatory agencies:

- Factory Manual
- B.O.C.A.
- City of New York
- I.C.B.O.
- therm. Decomp. Of products)
- U. S. Government
- S.B.C.C.I.

The manufacturers’ documentation of such agency acceptance, approval or listing shall include reference numbers identifying the applicable agency report or specification.

2.4 MANUFACTURER AND PRODUCT QUALIFICATION:

The system shall be International Cellulose Corporation, 12315 Robin Boulevard; Houston, TX 77045, 800-444-1252 Sona Spray "fc" or approved alternate. An alternate may be approved by Mr. Melvin Moore, Operations Manager, 434.395.2090 provided complete documentation of its compliance with this specification and a minimum 15 square inch sample of the proposed system is submitted to Mr. Melvin Moore, not less than 10 working days before the bid date.
2.5 PRODUCT GUARANTEE:

The manufacturer shall guarantee its products to be free from defects in materials and workmanship present at the time of shipment.

3.0 EXECUTION:

3.1 CONTRACTOR QUALIFICATIONS:

Contractor shall provide a copy of his license to apply the materials and the name of the person(s) who will apply the materials with a resume of his or her training and experience including a list of at least 10 comparable jobs he or she has completed successfully, the name of the building owner, its location, the nature and size of the area sprayed and the name and phone number of a contact person, operator, general contractor, or architect who can provide information on the quality of the materials and workmanship achieved on each job. All crew members shall be minimum Level I certified applicators as trained and tested by International Cellulose Corporation. Proof of certification shall be present on site with crew members.

3.2 CONTRACTOR INSURANCE: The insurance carried by the State of Virginia applies to this contract. The insurance limits are found in the General Terms and Conditions on the Website http://www.longwood.edu/purchasing.

3.3 PRELIMINARY INSPECTION BY CONTRACTOR:

Contractor shall inspect all surfaces to be sprayed and any conditions which might detract from the quality of the finished work shall be reported in writing to Mr. Melvin Moore, Operations Manager. No work may proceed until such conditions are corrected.

3.4 APPLICATION:

Material shall be spray applied in accordance with the manufacturers’ instruction at a nominal thickness of (1/2 or 3/4” thickness) and shall be of uniform color, density and texture free of irregularities, bumps, waves, depressions, loose unbonded material or thin spots. Overspray all completed surfaces with adhesive to lock down any loose material and protect against flaking. All edges at walls and fixtures shall be tamped and cut to produce a straight line of demarcation, leaving a natural and consistent appearance to all cut off points. Contractor shall retain the label information from the containers of both liquid and dry materials each day applied and make them available to the owner at the end of the day to confirm that the materials applied and application rate meet the specifications. Walls, floors, fixtures, and furniture shall be protected against over spray and structural members which can not be protected shall be cleaned of any unavoidable over spray promptly.

3.5 INSPECTION BY OWNER:

Contractor shall provide access to the work for inspection by owner at any time during the course of the work. Any materials or workmanship, which fails to meet the specifications herein, shall be
repaired or replaced to the satisfaction of the owner.

3.6 CLEAN-UP:

The contractor shall, to the extent practicable, clean up the work site as the job progresses and shall not allow waste material, supplies and equipment to accumulate and interfere with access to the work site or other areas of the building. Promptly upon completion of the work, contractor will remove all waste material from the building and leave the work site broom clean and in good order. All over spray, spills and other misplaced material shall be removed to the satisfaction of the owner.

3.7 COMPLIANCE WITH LAWS & REGULATIONS:

Contractor shall comply with all applicable laws and regulations particularly those relating to safety, health and environmental protection.

3.8 SUMMARY OF SUBMITTALS:

Contractor shall include with its bid proposal the following material:

a. Resumes of officers, managers and supervisory personnel who may be responsible for the work indicating experience and/or training which qualifies them for the responsibility.

b. List of at least 10 comparable jobs satisfactorily completed by the contractor indicating name, address, and phone number of owner and/or architect who is familiar with the quality of materials and workmanship provided on each job.

c. Documentation indicating compliance with the requirements of these specifications in general and with Sections 2.2, 2.3 and 3.2 in particular.

d. Manufacturers’ catalog cuts describing the proposed system.

e. A sample of the proposed system at least \( \frac{1}{2} \)” thick and having a surface area of not less than 15 square inches.